

COMMUNITY HEALTH SURVEYS

A Practical Guide for Health Workers

4. Questionnaire Design

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COMMUNITY HEALTH SURVEYS

A Practical Guide for Health Workers

Other numbers in this series :

Number 1. Planning and Organizing

Number 2. Survey Sampling

Number 3. Using Available Information

Number 5. Interviewing and Recording

Number 6. Presenting Survey Information.

QUESTIONNAIRE DESIGN

A Guide for Health Workers

**Prepared for the International Epidemiological Association
in collaboration with the World Health Organization**

by

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Published by

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1986

QUESTIONNAIRE DESIGN

For whom :

1. Doctors and health services personnel responsible for providing specific services at local level and who need more information so as to improve or develop health services in their local community.
2. Doctors and health services personnel responsible for planning, administering or providing services in larger administrative units and who in the course of their work require information that is not already available.

Aim :

To enumerate and define the stages involved in the design of a survey questionnaire intended for collecting information related to health within the local community.

The text of this booklet is divided into two sections. The general guidelines to the design of a survey questionnaire are given on the left hand pages. The guidelines briefly explain and summarise the points to be considered during the development of a questionnaire. On many of the left hand pages will be found brief texts enclosed in a box with «hands» pointing to an appropriate text on the opposite right hand page. The right hand side pages illustrate, by example, the application of the principles outlined on the left hand pages. Readers may choose, depending on individual preference, to read left and right hand pages in the usual sequence, **OR** they may prefer first to read the left hand pages only and then return to the start of the booklet to read through the right hand pages. The important exercise is, at some stage, to relate the content of the left hand pages and their boxed texts to the right hand side examples and applications.

Summary of the Basic Principles of Questionnaire Design

Nearly all interview survey questionnaires consist of four basic components (parts) :

1. Guidelines on the introduction to, and the ending of, the survey interview.
2. A section on the identification of the study unit and its location.
3. The main body of the questionnaire, which may subdivide into separate sections for each topic studied.
4. Interviewer guidelines, usually dispersed (spread) throughout the questionnaire.

The following points need to be stressed for the questionnaire as a whole, as well as for the separate sub-sections :

1. Check on the use of open and closed questions.
2. Check on any ambiguity of questions and words, on clarity and simplicity.
3. Check on the logical order of sections and of the questions within sections.
4. Check whether or not, for the type of respondent the survey will canvass (meet), the questions are reasonable in terms of :
 - (i) the knowledge required;
 - (ii) the reliance on memory and recall.
5. Check on lay-out and coding.
6. Ensure that all questions essential to meet the aims of the study are being asked, and that none are being omitted, especially all the necessary identification data.

GENERAL PRINCIPLES FOR DESIGNING A SURVEY QUESTIONNAIRE

INTRODUCTION

*The objective of all surveys is to collect information and the instrument of collection is the questionnaire. Before starting to design the questionnaire it is **essential** that the survey planners be very clear as to :*

- (i) why the survey needs to be done*
- (ii) how the survey results will be used.*

The previous booklet «Using Available Information» provides some guidelines for answering the first of these important questions. The second question will be answered in the last of these six booklets, but how the results are to be used also depends on what kinds of information have been collected and for what purpose.

The purpose of doing a survey can often be considered under three headings :

- (i) **to observe** : to find out how things actually are;*
- (ii) **to compare** : to obtain information on how things are now so that they can be compared with how they were at some previous time or in some other region.*

Examples and Applications

Workshop on Health Surveys

Introductory : Speaker : Dr. L. Retlaw.

Subject : Introducing Questionnaire Design and Workshop Procedure.

Dr. Retlaw opened the session by asking the audience whether or not everyone had taken a set of the questionnaires being handed out at the door. During this session each speaker would refer extensively to these survey questionnaires. Speakers would not restrict themselves to their own questionnaires alone. In order to illustrate or explain some feature of question design, speakers would be taking examples from several questionnaires.

When studying the questionnaires, it must be realised that the objectives of the various surveys are different and these differences are reflected also in the questionnaires. Most of the questionnaires are mainly for observational studies, i.e. they are designed to find out how things are. An example is Dr. Ashma's* nutritional study and his interest in the community's water supply. Dr. Singh,* in his school performance study, i.e. an observational study, is interested in how well pupils learn, but he is also interested in the comparison of boys with girls and whether the difference, if there is one, could be explained by the boys being given more encouragement by their parents. Dr. Singh's study is thus an observational, a comparison and a theory testing investigation (study).

* For full details of studies referred to see the previous three booklets in this series.

(iii) **to test an idea or theory** : * to obtain information that will justify or reject the proposed idea (theory).

Many surveys have aims that fall under several of these headings. A clear conception (vision) of what the survey hopes to achieve, greatly clarifies how the questionnaire should be structured and how the results, at a later stage, should be analysed and reported.

The quality of the information obtained during an interview survey depends heavily on three factors :

- (1) proper sampling design
- (2) the design of the questionnaire
- (3) the skill, training and supervision of the interviewers

In this booklet, we concentrate entirely on questionnaire design, a task that requires thought and skill. Designing a questionnaire, if properly done, takes much time and the questionnaire will go through several drafts and tests before it is finally ready and suitable for a particular survey.

A survey questionnaire consists of a sequence (series) of questions which the respondent is expected to answer. Respondents can give full and correct answers to these questions only if **each** question is itself carefully designed and clearly worded. Careful consideration must be given to the following :

* Testing an idea or theory is often referred to as «hypothesis testing». Such ideas or hypotheses should be proposed **before** the survey starts and **not after** the survey results have been seen and studied.

The program for this session was as follows :

Topic for Discussion	Speaker
1. (a) Starting the Questionnaire (b) «Closed» and «Open» Questions	Dr. K. Singh
2. Getting the Question Right : Wording and Phrasing	Dr. T. Tamburi
3. Questionnaire Lay-out	Dr. Chan Yip
4. Memory and Recall	Dr. J. Ashma
5. Some General and Practical Considerations	Dr. L. Retlaw

Dr. Retlaw emphasised that when designing a questionnaire, it was essential always to bear in mind both the respondent and the interviewer.

Questions have to be clear, short and expressed in simple terms in order to be understood by the respondent. Moreover, not only do the questions have to deal with topics about which the respondent knows or recollects, but also on which he is willing to respond. Many survey questions require knowledge that many respondents do not have or are often badly worded so that their meaning is unclear.

The interviewer's needs must also be taken into account. Interviewers will do much better work if the questionnaire is easy to use, there is enough space to write down the answers and there are clearly printed reminders and instructions on the forms.

1. **Type of Question Structure** - whether a question is to be «open» or «closed». (This is fully discussed in the next section).
2. **Phrasing and Wording of Questions** - is the question clear and easily understood ?
3. **Lay-out of the Questions** - has enough space been left for the respondent's name, for identification and for the written answers and the coding* ?
4. **Aids to the Respondents : Consideration of Factors Affecting the Respondent's Ability to Answer Correctly.**
5. **Aids and Instructions to the Interviewer** - to remind her (or him) of what she has to say and do at different stages of the interview.

* A «code» is a systematic representation of answers by symbols which are usually numbers or letters. Two typical examples are :

(1) Sex of patient :

female = 1
male = 2

OR

(2) Did your father own the house you live in ? :

yes = 1
no = 2
don't know or not sure = 9

More reliable survey information will be obtained if the respondent is encouraged to be interested in the interview. A poor questionnaire will ruin (spoil) a survey just as surely as will bad interviewing. A survey can only be successful if the sampling procedure, the questionnaire design and the interviewing methods are all done properly and to a high standard.

STARTING THE QUESTIONNAIRE

There are many ways of starting the design of a questionnaire. The following is a practical and very useful method for starting :

- Step 1 :** *Write out, as briefly as you can in one, two or three sentences, or as a short list, the most important aims of the study.*
- Step 2 :** *Make a list of the information directly relevant and necessary to meet the aims of the study.*
- Step 3 :** *Decide on the main sections (components) within the questionnaire such as :*
(i) a section on identification / address;
(ii) separate sections for each main aspect of the study.
- Step 4 :** *Within each section and for each item of information required, write out the questions which can be asked of the respondents and which you think will obtain this information.*

SPEAKER : Dr. K. Singh

**SUBJECT : (i) Starting a Questionnaire
(ii) Open and Closed Questions**

Starting a Questionnaire

Dr. Singh reminded his audience that people often had different ideas as to what was a questionnaire. Their ideas were largely based on the type of forms and questionnaires they themselves had used. Often such experience was gained from clinic forms and medical surveys. Clinical questionnaires are, of course, designed along similar lines as Dr. Singh was going to describe shortly. An example of a medical survey questionnaire was that used in the World Health Organization's «Study of Immunization Status and Reasons for Postponing Needed Immunizations». This consisted of a folded card* in which the examining doctor, acting as the interviewer, recorded the answers to his clinical questions by entering the appropriate «ticks» or other signs, as instructed.

However, health surveys are not always as clinical as this example and frequently include wide ranging questions on environment, housing, as well as social and psychological questions. He would find it much easier therefore to describe his method of starting a questionnaire and the designing of open and closed questions by using his own study of school performance as an example.

* See next page for an example of the completed WHO Immunization card.

Step 5 : *Check each of the questions under Step 4 against the aims of the study as written out under Step 1. Take out any section or questions that are not essential.*

Step 6 : *Check whether the list of questions under Step 5 will obtain and record all the information necessary for the study.*

Step 7 : *Examine each and every question under Step 5 and 6 and ask yourself whether it is :*

- (a) **Clear and Unambiguous.** Will respondents understand the question ?*
- (b) **Simple and Short.** Long questions and unusual words may confuse many respondents.*
- (c) **A reasonable Question to Ask.** Will respondents have the knowledge and experience necessary to answer the question ?*
- (d) **To be an «open» or «closed» question.***

Step 8 : *Check that the interview does not take too long.*

STUDY OF IMMUNIZATION STATUS AND REASONS FOR POSTPONING NEEDED IMMUNIZATIONS

NAME OF HEALTH FACILITY: A

DATE 1/7/33

LOCATION: URBAN ☐ RURAL ☒

INVESTIGATOR JENNER

TYPE OF FACILITY: ☒ IMMUNIZATION CLINIC OR POST ☐ CURATIVE CARE CLINIC ☐ HOSPITAL ☐ OTHER (SPECIFY)

IMMUNIZATION SERVICES YES ☒ NO ☐

STATE OR REGION FULTON

DISTRICT WEST

AGE GROUP (MONTHS): 3-11 ☐ 3-35 ☐

3-23 ☒ OTHER

PART A (ALL FACILITIES)										PART B (FACILITIES WITH IMMUNIZATION SERVICES)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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			M	F		DPT			OPV				Measles	Immunization status from: C	H history (H)	Fever	Cold, Cough (URI)	Diarrhoea	Vomiting	Malnutrition	Other (specify)	Convulsions	Reaction to previous dose	Other (specify)	Not screened for need of immunization	Temporarily out of vaccine	Interval since last dose too short	Other (specify)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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SUB TOTALS													SUB TOTALS												
No. already given	6	4	8	6	4	1	5	4	1		5	5													
No. given this visit			2	3	0	1	3	0	2	2															
No. needed but not given			0	1	2	2	2	1	1	2			1	1	1	1				1	1	1	1		

Some Additional Considerations.

A sound framework for the questionnaire should result if the preceding eight steps are followed. There is always a temptation to add more questions than are essential to meet the survey objectives.

This temptation must be resisted as extra, non-essential questions add avoidable complications for both the respondent and the interviewers, and moreover add to the cost of the study.

Frequently, in fact in most cases, extra and non-essential questions are not used or analysed at the end of the survey, and therefore, all the extra cost, time and effort is wasted.

Setting out the survey objectives and the main items of information to be collected.

The importance of dividing the questionnaire into its appropriate sections must be stressed. These sections, if clearly indicated on the questionnaire, help the planner in the logical selection and ordering of his questions and later greatly help the interviewer and respondent during the interview. A logical, sensible sequence of sections, with a logical sequence of questions within each section, will make it much easier to deal with a difficult or long questionnaire.

Dr. Singh's survey covered a number of randomly selected schools*; it was planned to visit each of these schools, with a visit lasting for several days. During these visits information was to be extracted from the school registers and the teachers interviewed about their pupils. Also, the pupils were to be individually interviewed and were to be given a short test in reading, writing and arithmetic. The first thing Dr. Singh did was to write down, very briefly, the main objectives of his study. He wrote this in large letters on two cards and set the cards on top of his desk so that he would keep looking at them whilst thinking about the questionnaire.

CARD I



Objectives of the Study :

1. Comparison of school performance between boys and girls who had a regular attendance of two to three years.
2. To test whether or not male children receive more support/encouragement than female children.

* For full details see Dr. Singh's survey in the second booklet : «Survey Sampling».

The converse is also true; even a relatively short and simple questionnaire will seem difficult if a logical order of sections and questions is not adhered to. The questionnaire sections often, and with advantage, follow the natural stages into which a visit or interview fall. For instance, in a mother and child care study, it is natural to start with the initial identification information, then to interview the mother before going on to examine the child, followed by a final recording of environmental conditions in the home, i.e. four distinct stages during the doctor's visit. These stages should also be reflected in the lay-out and question sequence in the questionnaire.

Step 6 must also be stressed. It is all too easy, and it happens surprisingly often, that some essential information is not asked or is not recorded. Such omissions will seriously limit the usefulness of the study as it is then no longer possible to meet all the objectives of the survey or to answer all the questions the study was meant to. The best method of preventing the error is to have a few colleagues or friends fill in the draft questionnaire and then to analyse these few completed questionnaires as you would do at the end of the study. It is truly surprising how often it is then discovered that some essential item has been left out.

Identification information is particularly prone (subject) to such errors of omission. Check particularly carefully that the full name, address, age and sex has been allowed for on the form. Identification and address are particularly important in «follow-up» studies where it is necessary to return later to the same person or study unit to see what changes or events have occurred since the previous visit. For some follow-up studies, it is an advantage to include additional information that may help later to trace (find) the respondent; this may include the work address and type of work done, the name and address of a close relative or friend and so on.*

** A «study unit» is defined as the basic or smallest unit with which the survey is concerned; it is this unit that the field workers must ultimately visit for interviewing, inspection or study.*

Obtain Information on :


1. The name of school, child and home address.
2. Each child, including :
 - (i) attendance
 - (ii) illness and any disability
 - (iii) age and sex
3. Each child's performance score on reading, writing and arithmetic tests.
4. The child's attitude to school.
5. The encouragement given by the parents for the child's education (as perceived by the teacher and the child).
6. Presence of other influencing factors :
 - (i) difficulty/method of getting to school
 - (ii) literacy of parents.
7. The child's home including :
 - (i) home conditions
 - (ii) parents attitude to child's education
 - (iii) parent's social, educational and occupational background.

Removing a section of the survey to keep within the means available.


Re-stating the most essential aspects of the study.

Natural sections of Dr. Singh's school survey; the questionnaire is divided into these same sections.

Very soon it became clear that resources were inadequate to achieve all these aims. The decision was taken to drop item 7, i.e. leave out home visiting, because :

- 
- (i) Home visiting would be expensive as well as time consuming.
 - (ii) The most important aim was to establish whether or not boys in the 8-10 age group did better than girls in the same age group and if it was possibly due to parents giving more support to their sons. If this survey could produce evidence that this was so, then a later survey could go more deeply into questions of home environment (conditions). The second, later survey, would definitely need to include home visits to collect information on the home environment and how it affected the childrens' performance.

The next stage Dr. Singh explained, referring us to his own survey questionnaire*, was to decide the basic structure of the questionnaire. The structure had to take into account the procedure that would be followed in the school, i.e. the way in which the interviewers would proceed to get the survey information. In this survey, the structure led naturally to four divisions :

- 
1. Recording each child's name, address and extracting relevant information from the school register.
 2. Interviewing the teacher about his or her pupils.

* See Appendix : Questionnaire 1, pages 95 to 101.

QUESTION STRUCTURE

«Open» and «Closed» Questions

There are two basic ways of setting a survey question. A question can be either «closed» or «open».

1. The Closed Question.

*The closed question offers a list of possible options (answers) from which the respondent must select **at least one answer**. Answers not included in the list are not permitted.*

An example of a closed question is the following in which the interviewer asks the respondent about each of four food groupings, in turn.

Question : *We are interested in what you had for your main meal yesterday. Did it include :*

- | | | |
|-------------------------------|-----|----|
| (1) fish or meat | Yes | No |
| (2) eggs | Yes | No |
| (3) milk or cheese | Yes | No |
| (4) peas, beans
or lentils | Yes | No |

Important to have sufficient information on identification; this also permits some checks on important information.


Vital information that allows a decision to be reached whether or not a child (sampling unit) should be part of the survey.

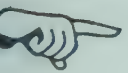
IT IS IMPORTANT TO KEEP FULL RECORDS OF ALL INDIVIDUALS OR SAMPLING UNITS EXCLUDED FROM THE SURVEY. The final survey report must show how many were excluded and give the reasons for the exclusions.

3. Interviewing the children individually.
4. Testing the pupils' reading, writing and arithmetic ability.

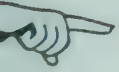
Within each of these sections, the sequence of questions had to progress naturally and logically from one topic to the next.

The section on identification was straightforward and included date of birth and address as taken from the school register. The information was needed because it provided :

- 
- (i) additional information to identify pupils with the same names;
 - (ii) a means of checking the age of the child;
 - (iii) a means of identifying brothers and sisters in the same class.



The first two sections included enough information, obtained from both the register and the teacher, to allow a decision to be made whether or not to include the child in the study, i.e. to decide whether the child was «eligible» in terms of the study criteria. These criteria included age, regular attendance and any prolonged illness or disability that seriously interfered with learning.



The information collected on children found to be ineligible (not suitable) was not thrown away. The partially completed questionnaires, i.e. the first two sections, from such excluded children were carefully kept so that the total number and percentage of ineligible children found could be reported and the reason given as to why they had been excluded.

2. The Open Question

The open question asks the respondent to answer in her own words. In particular, the questionnaire does not provide a list of answers (options) from which the respondent has to choose.*

Reducing the number of questions asked.

Checking whether or not the respondent is likely to know the information requested.

The previous closed question can be re-worded in the open question form as follows :



Question : *«We are interested in what you had for your main meal yesterday. Please list the food you ate at yesterday's main meal».*

In the open question, the respondent is not given a list of possible answers. When it is desirable to focus on (emphasise) some aspect of special interest, then the open question may refer to these special interests in broad, general terms. This can be done with the above question as follows, with protein foods as the special interest :

Question : *«We are interested in what you had for your main meal yesterday, and whether it included things like eggs or meat. Please describe yesterday's main meal».*

Open and closed questions.

** Respondents, as well as the interviewers, may be either female or male; for simplicity respondents and interviewers are assumed to be female in this discussion.*




Earlier drafts of the questionnaire had included many more questions and asked questions in great detail. Several of them had been dropped because they either made the interview too long or asked for information the respondent was unlikely to know. For instance, several questions had been asked of the teacher as to how parents showed their interest and concern about their children's progress. This was later felt to be asking for information that the teacher might not have and that for this first study such detail was not of prime (first) importance; it was sufficient at this stage to know whether parents took an active interest. Two questions did this; one question to the teacher (Section II Question 8) :

«Have either of the parents been to see you or have they enquired about their child's progress at school ?»

and one question to the child (Section III, Question 8) :

«Do your parents ask how you are getting on at school ?»

This gives us two different opinions, one from the teacher and the other from the child, each of whom is concerned and affected by the attitude of the parents.



Dr. Singh's questionnaire had both «open» and «closed» questions; some of the closed questions were used in a slightly different way than is usual, but this is discussed later. The first and most obvious «open» question was that addressed to the teacher (Section II, Question 9) :

«Have you any general comments to make about this child's behaviour, ability or progress at school»

A typical answer to this question, written down exactly as spoken, was :

Enough space must be left after each open question for the interviewer to write down in full, i.e., word by word, the respondent's reply. This will take much longer than just circling one or two of the options listed in a «closed» question.

Example of an open question and its verbatim (written down as spoken) recording.

More about Closed Questions

The closed questions should aim to :

(1) Offer a list of options (answers) that are exhaustive, i.e. cover all possibilities.

(2) If possible, offer a list of options that are mutually exclusive. i.e. any one option chosen excludes all the others.

(3) Offer only a small number of options.

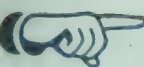
Encourage participation by showing interest in the respondent's opinions.

Be aware of possible difficulties in interpreting/coding open questions later in the study.


(1) The list of answers should be exhaustive.

An exhaustive list is a list that includes all possibilities.


This is easily achieved, where necessary, by adding a «residual» or «dumping» category at the end of the list of options. The following two questions are typical examples :



«Nazeem is a very shy girl, a slow learner, but very diligent and attentive. She needs encouragement to express herself; she is not as bright and lively as her older brother who was in this class last year».



The purpose of this particular question was firstly to allow the teacher to express an opinion; to enlist (get) the teacher's co-operation it was necessary to let the teacher know that his or her opinions regarding the children were of interest and value.



Secondly, this open question provided an opportunity to find out from the teacher any important factor(s) affecting the child's progress and learning. Although coding open questions is often very difficult, in this instance later coding proved to be easier than expected because most teacher comments expanded on, (i.e. gave more information about), whether the family background was helpful or not, and how inhibiting (damaging) any handicap was. Teachers often referred to their own opinion and experience of the child's mental and intellectual ability and this information too could usefully be related to the test scores for arithmetic, reading and writing.

Most closed questions for this survey proved to be surprisingly difficult to formulate (write down). Some of the closed questions were affected by several problems which included setting out a list of options that were mutually exclusive and exhaustive, i.e. every respondent's reply would fit one of these options but not more than one; for instance, as in the question to the teacher (Section II, Question 3) :

First Example : *The interviewer is speaking to a mother who has mentioned the recent death of one of her children.*

Question : *«What was the cause of your child's death ?*

- (a) An accident or serious injury.*
- (b) An injury or cut becoming infected (septic).*
- (c) Chest infection or problems with breathing.*
- (d) Stomach upset, vomiting and diarrhoea.*
- (e) Some other reason».*

Note the small number of options, only 4.

These five possibilities are «exhaustive» since, for every death, at least one of these answers applies.

In this example, the residual or dumping category is «some other reason»; it will be chosen by those respondents for whom none of the first four options fit the situation.

Second example : *The interviewer is speaking to a mother who has just said that her child has been ill with fever.*


Question : *«Can you please tell me more about the illness ? Was it :*

- (a) malaria*
- (b) scarlet fever*
- (c) measles*
- (d) mumps*
- (e) diphtheria*
- (f) chickenpox*
- (g) some other type of fever*
- (h) not sure/don't know»*

*Note how the word «**primarily**» serves to turn this list of non-exclusive options into a mutually exclusive list of options. In practice it does not always work well.*

Note the residual or «dumping» category to make the number of options exhaustive.

«In your view, have these absences from school affected the child's learning and progress ?»



The four response options given to this question are mutually exclusive and exhaustive, but the first two options are subjective. By what means can the teacher assess the extent, or permanence, of any effects on the child's progress ? However, for the purpose of this survey, Dr. Singh was willing to accept a broad definition and to assume that teachers would more or less agree amongst themselves when a child's progress had been adversely affected. To lessen the uncertainty of the teacher's assessment, the question went on to ask the teacher to explain in what way the child's learning was affected (if he thought the effect was serious).


Not all closed questions in this study offered mutually exclusive options. For instance, question 4 goes on to ask :



«Are the absences from school **primarily** due to :

1. Illness
2. Poverty
3. Child's help required at home
4. Other reasons

Please state;

- 
5. Don't know»

In this question, there are two dumping categories given by (g) «some other type of fever» and by

(h) «not sure/don't know».

Every respondent, who has a child with a fever, can find amongst this list at least one answer that more or less describes her child's illness or allows her to indicate that it was some other type of fever or that she does not know. This exhausts the logical possibilities.

Survey plans occasionally go wrong; even the best plans sometimes work out differently in practice.

(2) The list of options should, if possible, be mutually exclusive.

A mutually exclusive list of options is a list in which one, and only one, of the answers fits the respondent's case.

Example :

Question : *«Can you please tell me roughly how long it would take a healthy man to walk to your nearest doctor or health centre ?»*

(a) less than one hour's walk

(b) between one and up to two hours' walk

(c) between two and five hours' walk

(d) more than five hours' walk but less than twelve hours

(e) twelve hours or more


(f) don't know

Note that in each question :

(I) there are few options, only 5.

(II) these five options are mutually exclusive and exhaustive.

(III) there is one «dumping» category.




Because the word «primarily» (or most important) is stressed, they might seem to be a set of mutually exclusive and exhaustive options; in practice, it turned out not to be the case. Illness, poverty and «child's help needed at home» are often inter-connected. Most teachers insisted on choosing more than one of these options and so turned this into a multiple-response question. We were also asked to note that answers to option 4, «other reasons», could include several reasons. Although this question seemed to be very informative, it was impossible to analyse or interpret with any precision because of the multiple responses some teachers gave to what was intended as a single response question.

The closed questions put to the pupils were much simpler, for example (Section III, Questions 11 and 12) :

11. «Can your parents read ?»

1. Both can read
2. Father only
3. Mother only
4. Both cannot read
5. Don't know

12. «Can your parents write ?»

- 
1. Both can write
 2. Father only
 3. Mother only
 4. Both cannot write
 5. Don't know

These options are «mutually exclusive»; one of them is bound to be correct. Once one of these answers has been chosen, all the other answers no longer apply. Compare this with the list of options in the previous example. In that example, it is quite possible for a child to have two or more attacks of fever in a year, each being a different fever. Measles, mumps, diphtheria and malaria are not mutually exclusive even within a one-year period. Similarly, in Example 1 above, the reasons for death are not mutually exclusive since it is possible for death to have more than one cause; a child may die due to a combination of «chest infection» following an initial «stomach upset».

Replicating (repeating) important questions

Many surveys use both «open» and «closed» questions.

Questions are sometimes repeated, once as an open question and once in the closed form at a different point in the survey as a check on the respondent's consistency or where the question is especially important to the study.

Examples of this are found in demographic, family planning or fertility studies where it is important to ascertain (find out) the attitude of young wives to family size. The following are two similar questions that augment (support) each other :

Very young persons, or very old, sometimes have to be talked to gently before useful information can be obtained. Care must be taken not to influence (bias) the answers by this friendly discussion.

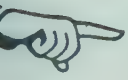
Problem : When is it best to code the replies ? There is no general rule, but it is usually better not to code «in the field» if it can be avoided.

Each of these questions offered a set of simple mutually exclusive and exhaustive options. The purpose of the questions was to ascertain the general educational background of the home and whether or not the parents were actually capable of helping with the homework; if they could not read or write then clearly they could give only limited help.

Interviewing the children presented its own problems. These young children could only be asked straightforward, simple questions such as (Section III, Question 7).

«Do you find your homework easy ?»

- 1. Yes, all homework is easy
- 2. Yes, most homework is easy
but not
.....
- 3. Difficult/cannot do it



The interviewer needed to talk to most children before she could get them to quantify their answers, i.e. say how much or how little difficulty they experience with their homework. The options were designed to help the interviewer because not all children were able to respond by making a direct choice of one of these options.



Many of the children gave answers in their own words (open answers) and it was then up to the interviewer to decide which of the list of options best fitted the child's answer. Dr. Singh went on to stress that, as a general rule, interviewers should not be asked to code open questions during an interview. When interviewing young children, it can be difficult to avoid this because a very young person may not be able to choose

First question (closed) :

«How many children would you like to have ? :

- (a) no children at all*
- (b) one child only*
- (c) two children*
- (d) three to four children*
- (e) five to six children*
- (f) more than six children*
- (g) no firm opinion/don't know»*

A case of learning from experience. Sometimes questions turn out to be more difficult than first realised.

Note : the above is an «exhaustive» as well as a «mutually exclusive» list of options.

Several simple questions are often better than a single complex question.


Second question (open) :

«What do you consider is the ideal (best) number of children for you and can you give me some reasons for your choice ?.»


This question and the previous one are not exactly the same, but they each ask about the wife's attitude towards the size of family she would like. (Note : a couple may have either more or less children from what they consider «ideal»). However, many wives will give roughly similar answers to these two questions.

The first of these two questions requires a simple numerical answer. The second question checks (verifies) whether the respondent is being serious and consistent in her wish for children. However, the second question does more than that; it offers an opportunity to the respondent to talk freely about family size in general terms and to give reasons why she wants a family of a certain size. This second question must be put in another part of the questionnaire and not follow immediately upon the first question.

from a set of options without some help. The child may, however, be quite able to answer in his or her own words. Generally, such answers should be taken down in full and someone else should do the coding. When the options are few and straightforward it may be suitable for the interviewer to code what is said during the interview. Some survey organisers will criticise this, but it was the procedure followed during this survey as it was much quicker and easier.



When analysing the questionnaires at the end of the survey, it became clear that it would have been better to make Question 7 (Section III) more specific; as it stood it was a question about homework in broad, general terms which were too difficult for a young child. Having learned from that experience, Dr. Singh would now turn this into three questions, with a specific first question, followed by two general questions. For instance, it would have been better to replace Question 7 by :



1. «Was yesterday's (or your last) homework easy ?

- 1. Yes; it was all easy
- 2. Yes; most of it was easy except for
.....
- 3. No; it was difficult

followed by :

2. «Was that homework very different from your usual homework ?»

- 1. No/About the same
- 2. Yes/a lot different

3. «Do you usually find your homework easy ?»

- 1. Yes
- 2. Only sometimes
- 3. No

(3) The number of options should be small

The number of options should be kept short, no more than 8, if possible; often only two to six «answers» are listed. If a list of options is too long, respondents tend to ignore some of them, especially those in the middle. The longer the list of options, the greater is the respondent's tendency to choose an option near the top or near the bottom of the list.

In the previous closed question on family size, there were six options, starting with «no children at all», and ending with «more than six children» plus a «no firm opinion/don't know» category. These options could have been different, as for example :

- (a) two or less children*
- (b) three to five children*
- (c) more than five children*
- (d) no firm opinion/don't know*

Which of these two lists of answers is better ? There is no simple rule; in this particular example it would depend upon :

Dr. Singh went on to stress that questionnaires were not always as complex as his own. Asking about opinions or assessing (evaluating) situations makes question wording and the choice of the response options more difficult. Sometimes, as in his own survey, it was not even feasible for all closed questions to have mutually exclusive options.

In many situations however, a survey form could be simple and uncomplicated. This was especially so in situations where the interviewer was recording factual information.

A good example* was a survey using a postal** questionnaire about the preferred method of diarrhoeal rehydration. Replies were received from 586 health workers working in 81 countries. Question I in this questionnaire determines the respondents' post or training; six options are offered and the option that applies is «ticked», i.e. a ✓ mark put into the box that applies and the other five options left blank (unmarked).

* The first two pages of the questionnaire are reproduced from : «A world-wide survey on the treatment of diarrhoeal disease by oral rehydration in 1979» W.A.M. Cutting. R.I. Omer and S.J. McLean.

** Postal surveys require sending questionnaires to respondents by post and requesting them to fill them in and then to post the completed questionnaire back to the survey organiser. This works well in many situations, provided the respondents are literate and are interested in the survey questions. The percentage of respondents who complete and return the questionnaire is usually lower than the percentage of people agreeing to take part in an interview survey.

- (i) **the purpose of the study** : *if the study's main interest is to find out how many people want large families (more than five children for instance), then the above shorter list will do. If a more detailed study of family attitudes is required, then the earlier and more detailed list of options is preferable.*
- (ii) **the culture/religion of the community** : *in many countries it would be almost inconceivable for couples not to desire children and in such countries the option «no children at all» is redundant (not necessary).*
- (iii) **comparisons with other studies** : *if there is a need to compare the survey results with similar studies done elsewhere or with previous surveys then it is important to keep the list of options the same as (comparable with) that given in the other studies. Unless this is done, comparison between the surveys may not be possible.*

General Rule :

Keep the number of options in a closed question to the minimum consistent with the needs and objectives of the survey.

For emphasis, please note :

- (i) **Whenever possible, closed questions should provide a list of mutually exclusive options.**
- (ii) **The list of options must be exhaustive even if not mutually exclusive.**
- (iii) *Mutually exclusive answers are very much easier to summarise, analyse and report.*
- (iv) *Closed survey questions are more frequently used than open questions.*

DIARRHOEA TREATMENT - QUESTIONNAIRE

1

Please answer the questions. Where indicated put a tick (✓) in the appropriate box.

Your name:

Your address:

1. Post or training of person answering questionnaire.

- 00 ☐ Doctor
 01 ☐ Nurse
 02 ☐ Medical Assistant
 03 ☐ Auxiliary
 04 ☐ Administrator
 05 ☐ Other (specify) (5-6)

2. Principal employer or organisation providing care:

- 00 ☐ Government
 01 ☐ Local authority
 02 ☐ Private practice
 03 ☐ Voluntary agency (e.g. mission) (specify)
 04 ☐ Other (specify) (7-8)

3. People being served:

- 00 ☐ Principally urban
 01 ☐ Principally rural
 02 ☐ Mixed urban/rural
 03 ☐ Other (specify) (9-10)

NOTE: The next two questions are different. Indicate the main treatments given in your clinic or service THREE YEARS AGO and NOW. Number in order of important (1-4), the four most common treatments.

(i.e. ☐ 3 ☐ 2 ☐ 4 ☐ 1)

4. Number in order, the most common treatments given to a child with moderate/severe diarrhoea THREE YEARS AGO:

- ☐ Antibiotics (11)
☐ Sulphonamides (12)
☐ Kaolin (13)
☐ Intravenous rehydration (14)
☐ Dietary restrictions (15)
☐ Anti spasmodics (16)
☐ Oral fluids (17)
☐ Indigenous medicines (18)
☐ Not known (19)
☐ Other (specify) (20-21)

5. Number in order, the most common treatments given to a child with moderate/severe diarrhoea NOW:

- ☐ Antibiotics (22)
☐ Sulphonamides (23)
☐ Kaolin (24)
☐ Intravenous rehydration (25)
☐ Dietary restrictions (26)
☐ Anti spasmodics (27)
☐ Oral fluids (28)
☐ Indigenous medicines (29)
☐ Not known (30)
☐ Other (specify) (31-32)

Advantages of the closed question

1. *Answers can be given and recorded quickly.*
2. *The respondent is made to concentrate on (think about) those items that are of special interest to the survey.*
3. *The list may contain important items which the respondent might not remember to mention if she had not been reminded by the question list.*
4. *The replies will be easy to analyse at the end of the survey because they are already set out in a way suited for analysis.*

Disadvantages of the closed question

1. *The list of «answers» provided by the question may not fit or suit the respondent; she is asked to select at least one answer from a list of options, none of which may adequately describe her experience or condition.*
2. *The respondent may be influenced in the answers she gives just because she is offered a list from which to select an answer; she may feel these are the answers she is expected to make, even if they do not describe her case.*

Advantages of the open question

1. *The open question allows the respondent to speak in her own way without offering (suggesting) specific answers and therefore she is less influenced. This may lead to more truthful and revealing answers.*
2. *The open question does not restrict the respondent to specific answers; she may therefore talk about matters not previously expected or considered. In attitude, psychological and health studies, this free conversation offers the respondent more opportunity to talk openly and in some depth (detail) about those things that are important to her and how she feels about her own problems.*


<p>6. What are the local beliefs about the cause of diarrhoea in children?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____ (33-34)</p>	<p>10. In what volume of water is this formula (powder) mixed?</p> <p>_____ ml (41-45)</p>
<p>7. How will these beliefs influence the type of treatment people accept for diarrhoea, (e.g. no faith in scientific medicine for diarrhoea, or needs an injection, etc.)</p> <p>_____</p> <p>_____</p> <p>_____ (35-36)</p>	<p>11. Who mixes and prepares the rehydration powder? (If this is used):</p> <p>00 <input type="checkbox"/> Hospital pharmacy</p> <p>01 <input type="checkbox"/> Commercial company</p> <p>02 <input type="checkbox"/> Non-pharmacist health worker</p> <p>03 <input type="checkbox"/> Other (specify) (46-47)</p> <p>_____</p>
<p>8. Are you using any of these mixtures for oral rehydration?</p> <p>00 <input type="checkbox"/> UNICEF/WHO (oralyte) packets</p> <p>01 <input type="checkbox"/> Other packets (give name)</p> <p>_____</p> <p>02 <input type="checkbox"/> Packets made up locally</p> <p>03 <input type="checkbox"/> Ready made-up rehydration fluid</p> <p>04 <input type="checkbox"/> Home-made mixture measured with spoons</p> <p>05 <input type="checkbox"/> Home-made mixture measured with hands.</p> <p>06 <input type="checkbox"/> Not known</p> <p>07 <input type="checkbox"/> Other (specify) (37-38)</p> <p>_____</p>	<p>12. What is the cost of 1 litre of rehydration solution in local currency?</p> <p>a) If bought by the patient</p> <p>cost <input type="text"/> <input type="text"/> currency _____ (48-49)</p> <p><input type="checkbox"/> not known (50)</p> <p>b) If bought in bulk</p> <p>cost <input type="text"/> <input type="text"/> currency _____ (51-52)</p> <p><input type="checkbox"/> not known (53)</p>
<p>9. Write down the formula of rehydration fluid being given by MOUTH in your service. (See packet or bottle label etc.)</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____ (39-40)</p>	<p>13. What teaching is given about how to use the solution?</p> <p>00 <input type="checkbox"/> Left to who gives out mixture</p> <p>01 <input type="checkbox"/> Standardised verbal instructions</p> <p>02 <input type="checkbox"/> Instruction leaflet to family in local language</p> <p>03 <input type="checkbox"/> Instruction leaflet in local language with pictures</p> <p>04 <input type="checkbox"/> Not known</p> <p>05 <input type="checkbox"/> Other (specify) (54-55)</p> <p>_____</p>

Postal questionnaires are most useful when :

- 1. There exists a reliable postal service.*
- 2. The respondents are well motivated to reply*
- 3. The respondents are well educated and literate.*

Disadvantages of the Open Question

- 1. The respondent's answers to the open question take longer to write down and, (as a result), interviews can become long and tiring.*
- 2. The respondent may talk about things that are of no importance to the study. A skilful interviewer can bring the conversation back to matters relevant to the survey, but time will have been lost.*
- 3. The respondent may not remember, at the time of the interview, all the things that affect her or are of importance to her when there is no list to remind her.*
- 4. The open question can be difficult to analyse. Each respondent answers in her own words, and in her own way, giving information on many aspects not of direct relevance. She may also include in her answers things that are difficult to interpret or understand.*



This particular postal questionnaire has some interesting features. Note how, after the space for identification (name and address) the first three questions provide mutually exclusive and exhaustive categories, including the residual or dumping category «other». The next two questions are of a different type, the options being not mutually exclusive and several applying at any single centre. The respondent is asked to indicate which of the various treatment options are used most frequently, which comes second, third and fourth in frequency of application. The respondent is to show this by putting the number 1,2,3 and 4 into the appropriate treatment box.

Questions 6 and 7 are «open» questions and allow room for free comment, whereas question 9 allows for the various possible factual descriptions of the fluid used in oral rehydration. This is a neat, effective postal questionnaire but is, of course, only suitable for literate and well trained respondents such as doctors and laboratory technicians.

Dr. Singh drew the audience's attention to another example of a simple, straightforward survey questionnaire that was used by WHO in a health and sanitation survey in Samoa*. The questionnaire consisted of seven sections, the required information being obtained partly by interviewing the mother/wife of each household and partly by inspection of the premises, the water and the sanitation facilities available.

This questionnaire, as is usually the case, started with a section on «General Information», most of which was information to identify the village and household. Under the second section «Maternal and Child Health», the name of mother is filled in and this is followed by writing, encircling or ticking the appropriate items.

* See Appendix : Questionnaire 7, page 118 to 121.

GETTING THE QUESTIONS RIGHT

Phrasing and Wording of Questions

The following rules will help to make questions clear and unambiguous (have only one meaning) :

- 1. Ask short, specific questions.*
- 2. Use simple, everyday words.*
- 3. Ask one question at a time.*

Each question must ask about one single item only. Questions that seek answers to more than one item of information are sometimes called «multiple» or «compound» questions; compound questions are confusing to the respondent as well as to the interviewers. For example, the following is a compound question because two questions are asked in the sentence.

«How many children do you have and how many are going to school ?»

This may appear to be a simple direct enquiry, but it is not; it consists of two separate questions. In this question it is difficult to interpret (understand) the answer if the respondent says «none». Does the respondent mean she has no children or does she mean none of her children are going to school ?

The question can be rephrased (re-worded) as two simple and separate questions.

Example of an involved compound question.

- 1. How many children do you have ?*
- 2. How many of your children go to school ?*

SPEAKER : Dr. T. Tamburi

SUBJECT : Getting the Question Right

Dr. Tamburi started his talk by referring to his own project : «A Survey of Urban Housing and Living Conditions in Relation to T.B. and Eye Infection». He and his fellow workers on the survey found it difficult at times to get their questions right and their questionnaire was revised (changed) several times before they were reasonably satisfied.

The difficulties they had with certain questions could not be illustrated with the questionnaire in its final form, because in the final questionnaire the necessary changes had been made in order to improve these questions. Instead of discussing the final questionnaire he would discuss some of the earlier questions in the form in which they were first suggested. This would make clear what was wrong with them and how they had been changed and re-written to make them suitable.

In the first draft of the questionnaire, emphasis was still on finding out what the city's inhabitants felt about the way the authorities managed city affairs. One of the questions appearing in the first draft was :

«In your opinion, are the arrangements made by the city for housing, helping old people and providing general services adequate ?»

In the above form the question was much too complex. This was a compound question which asked about three different topics : about housing, about provisions for old people and about general services. Each of these subjects needed separate questions.

Each of these two questions must now be answered separately and there is no longer any confusion.

Breaking a compound question into a number of questions, one short question for each topic in the compound question.

*In ordinary, every-day conversation, such compound questions are usually acceptable because during the conversation any misunderstandings can be cleared up by further questions, answers and discussions. A survey does not provide the opportunity for doing this, because, **during** a survey interview, it is important to put the same questions in the same way to all respondents.*

Slight change in the wording and phrases used so as to retain the attention of the respondent.


A frequent problem : The excessively general and vague question.

Supplementary (extra) questions and information to make the meaning or answers clear, can easily confuse; giving more information also takes up more time and leads on to questions and answers which are not vital to the study.


Matters are made worse if the interviewer is unaware (does not notice) that the respondent's answer is unclear.


Examples of poor wording, that may influence, i.e. bias, the respondents answer.

Such word induced biases are often difficult to detect; every effort must be made to discover them before the survey starts.




The first necessary change was to recast (re-write) the question into three separate enquiries :

- 
1. In your opinion, is the city doing enough about housing ?
 2. In your view, are the city authorities doing enough to help the old people ?
 3. Are you satisfied with the city's general services ?



Note how the wording has been changed slightly between these questions to make them more interesting for the respondent; it would be boring if each of the questions to start with the same «In your opinion...». Although making these changes to the original question has improved matters, the questions were still not acceptable. All the questions were far too general; it was also felt that these three questions, whilst important, would take up too much of the interviewer's time. Objection was also made that the wording used, such as «Are you satisfied» and «doing enough» which might suggest to some respondents that the interviewer expected them to be critical of the city authorities. More neutral, unbiased expressions were needed. The objections could be overcome by a change of wording, by replacing each of the above questions by a number of short, specific questions and by using jump instructions where possible.



To illustrate how this was done, the second and third questions about old people and about general services were first replaced by the following short questions :

The interviewer therefore will not clarify the response (answer) so that at the end of the study it is not known what the respondent meant.

Example of a «jump instruction» to avoid asking questions that do not apply to the respondent.

Filter (Jump) Instructions

A filter instruction is an instruction to the interviewer not to ask certain questions if they are not applicable to the respondent. Filter instructions are usually printed on the questionnaire at the place where a decision has to be made whether or not to ask the next question.

Some questions only apply i.e. make sense, if the respondent has already answered a previous, earlier question in a certain way. Such is the case in the second of the following two simple questions :

First Question : *How many children do you have ?*

Second Question : *How many of your children go to school ?*

Here, the second question only applies if the respondent has one or more children. A filter instruction is then inserted, such as : «If there are no children then jump (go) to Question Z», where Z is the number of some question further down in the questionnaire.

Using a filter in this way, the above two questions would appear on the questionnaire as follows :

Question 1 : *«How many children do you have ?»*

If «None», then go to Question 3.

*Example of an **unconditional** jump instruction; if the respondent has answered questions up to this point i.e. up to Question 6, then the next question(s) does not apply to her.*

2. Are any old people living with you in this house ?
Yes/No
If «No», then go to question 8.

3. Please tell me their name, whether male or female, their age and about any disability they may have.

NAME	SEX	AGE	DESCRIBE DISABILITY
i)			
ii)			
iii)			

4. Have you, or others in this family, asked the city for some support for the old person(s) living with you ?
Yes No Don't know
If «No» or «Don't know», then go to question 7.

5. Please tell me about the support for which you asked.
What kind of help did you want ?
.....
.....

6. As a result of asking, what help did the city provide ?
.....
.....

Go to question 8.

Question 2 : «*How many of your children go to school ?*»

Question 3 :

Note :

1. *If the respondent replies that she has children, then Question 2 is asked. If she answers «No children», or something similar, then the next question asked by the interviewer is Question 3.*

2. *Filter instructions are very useful if used sparingly (not too often); they should only be **used to jump to questions further on.***

Do not use filter instructions to return to an earlier part of the questionnaire. *Filter instructions can become confusing and difficult to follow unless used sparingly and with care.*

Silly Answers to Silly Questions

There is an English proverb (saying) :

«Ask a silly question and you will get a silly answer»; this is certainly true in survey work.

«Silly» questions usually arise because insufficient care was taken when formulating (composing and writing) the question and because survey organisers are insufficiently aware of the difficulties respondents have in answering some types of question.

The «general service» question replaced by a few short questions on refuse, its collection and possible danger to health.

Nothing hypothetical about this question; it is a direct and simple factual enquiry.

*Example of an **opinion** question; the respondent is asked to say what she feels or thinks about a problem.*

7. What was the reason for not asking for help :

- (i) Did not know city gave help for old people
- (ii) Did not need any help for the old people
- (iii) Did not think we would get any help from the city
- (iv) Some other reason.

State :
.....

8. How often does the city collect refuse in the area in which you are living ?

- (i) at least once a week
- (ii) once every two weeks
- (iii) less than once every two weeks
- (iv) irregular/no fixed collecting times.

9. What do you think about these collecting times ?

- (i) Should be done more frequently/more regularly
- (ii) About right/satisfactory
- (iii) Could be done less often
- (iv) No opinion/Don't know

10. Do children play or collect things on or very near these refuse piles/collecting points ?

Yes No Don't know/Haven't seen

11. Would you say the refuse collecting point was :

- (i) An important cause of flies and insects in your neighbourhood ?

Yes No Don't know

- (ii) The cause of bad smells in your area ?

Yes No Don't know

- (iii) An important breeding ground for mice and rats ?

Yes No Don't know

Silly and confusing questions can usually be avoided if the following rules are applied :

- 1. Avoid questions that are too general; keep questions specific.*
- 2. Avoid hypothetical questions (i.e. questions about what might happen, but has not yet happened).*
- 3. Avoid asking about preferences and comparisons unless respondents have experience of the things being compared.*

The importance of asking respondents about things they know and which affect their work, families, health and interests.


The following are examples of questions in which these rules have not been observed.

Example Question 1. : *«Are most people you know satisfied with the medical care given at your Health Centre ?»*

This question is far too general for several reasons, such as :

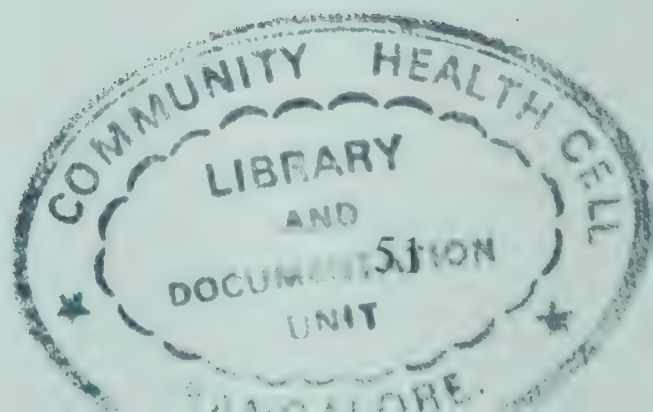
- (i) the respondent may not have thought very much about her Health Centre services and therefore has no clear opinion about the problem.*
- (ii) the respondent, and her family, may have no personal experience of the Health Centre.*
- (iii) the phrase «most people you know» is very general; with how many of her friends and relations has the respondent discussed the Health Centre services ? - probably very few, if any.*

The original question about «general services» needed drastic changes because the phrase «general services» was a wide, ill-defined expression conveying (meaning) different things to different respondents. It was unlikely that respondents would know much about «general services» except those few aspects of which they have personal experience. Therefore the question on «general services» was replaced by a few simple but specific questions about refuse collection. These changes, whilst still not the final changes to be made, did much to make the questions short and specific. The jump instructions allowed the interviewer to avoid inappropriate questions, thus saving time and helping to retain (keep) the respondent's interest.



Dr. Tamburi was very emphatic (sure) that it was much better to ask simple, clear and direct questions about ordinary things such as support for the elderly and refuse collection, both of which affect people's lives, than to ask vague and general questions that would confuse many of the respondents.

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Example Question 2. : «What would you do if your house, or your neighbour's, caught fire ?»

This is a bad question for at least two reasons :

- (i) This is a compound question consisting of two separate questions - action to be taken if one's own home caught fire and action to be taken if a neighbour's house caught fire.*
- (ii) The question is hypothetical - how can anyone give a sensible answer as to what they would do in a stressful (frightening) situation ? Respondents can only imagine what they might do under these circumstances.*

Example Question 3. : «Growing rice in this area depends on sufficient rain flooding the fields in spring. Sometimes these rains do not come, or come too late, and then there is a shortage of food. To avoid this, some people say you should also plant other crops such as corn (maize) or millet. What is your opinion ?»

The respondent may have difficulty with this question because the farmer is asked to decide on another farming method and other types of crop, about both of which the villagers may have no experience or first-hand knowledge. However, the interviewer's introductory remarks leading up to the question and explaining to the respondent the reasons for asking the question, are helpful and sensible, thereby increasing the respondent's interest and motivating her to give serious thought to the question.

QUESTIONNAIRE LAY-OUT

The «lay-out» of a questionnaire concerns the spacing and positioning of both the questions and answers, either pre-coded or open, and the positioning of the interviewer's instructions.*

The lay-out of a questionnaire is important because when it is well thought out it will :

- 1. Make the questionnaire easier to use during the interview.*
- 2. Give better guidance and reminders to the interviewer, thereby improving the quality of the interview.*
- 3. Prevent confusion as to how to indicate the response to a question.*
- 4. Make it less likely that questions, answers or instructions will be overlooked.*
- 5. Make it easier at the analysis stage for the organiser to interpret the answers, be they ticked, circled or written.*

If there is insufficient space between questions and items, then a poorly placed or badly written tick or circle can easily be misread (mistaken) as belonging to another item for which it was not intended.

Ample (enough) space for writing down the answers is especially important for open questions. In open questions the answers given by respondents will be of different lengths, each respondent expressing herself differently and some talking more than others. Allowance must also be made for some interviewers having larger hand writing and therefore requiring more room for recording their notes and comments.

**Only closed questions can be satisfactorily pre-coded, i.e. have response item codes shown on the questionnaire.*

SPEAKER : Dr. Chan Yip

SUBJECT : Questionnaire Lay-out

A well planned questionnaire lay-out, Dr. Chan Yip explained, would lead to an attractive questionnaire that was easy to use during an interview and easy to complete (fill-in), resulting in fewer mistakes being made at all stages of the survey. His own questionnaire, designed for a study of hygiene in eating houses, was very long and for this reason he only included the first seven questions in the circulated questionnaires.* Instead, he was going to discuss the lay-out of Dr. Desai's questionnaire** used in the «Survey of Accidents at Three Health Centres». Dr. Desai's questionnaire was relatively complex and therefore contained examples of many of the features and problems with which lay-out was concerned.

The first feature to note was that the questionnaire was designed in two separate sections. The first section (pages 107-110), dealt with the medical condition of the accident patient and was to be completed by the doctors in charge of the patient. Normally, this medical section would be filled in initially by the doctor on duty at «Accident and Emergency» and later completed by the doctor in charge of the ward, if the patient was admitted as an in-patient.

*See Appendix : Questionnaire 2, pages 102 to 106.

**For the complete questionnaire, see Appendix : Questionnaire 3, pages 107 to 112.

Instructions and questions should be clearly separated, but so placed that the instructions can be seen next to the question to which they apply. This is sometimes achieved by printing instructions in smaller, but darker print or by putting the instructions in the margin on the same lines as the question to which the instruction refers. In surveys where interviewer instructions are numerous, it is often helpful to leave a wide margin to be used only for those instructions.

Start of section on identification.

Division into Sections :

Many questionnaires will naturally divide into several sections. Within each section, the questions will be concerned with some special aspect of the study such as nutrition, type of housing, medical history and so on.

Start of Section 2., on state of patient on arrival.

The questionnaire is easier to use if :

- (1) a few lines are left blank (empty) between these sections.*
- (2) at the start of each section, the interviewer is given some sentences to say, telling the respondent that the interview is now passing on to another topic. The respondent's interest and attention is improved if there is a short break between asking questions and also if they are told something, even a very little, about why the new information is needed.*

A Medical Reporting Form*

Patient
Survey No.

2. Arrival at Centre:

- (1) Date:

- (ii) Time:

4. Address/location/other identification

5. Age of Patient

- 6.
- Sex of Patient
-

7. Condition of patient on arrival:

- (b) (1) fully conscious
(2) confused/concussed
(3) unconscious
(4) dead

If 'Dead', go to 12.

- (c) Pulse Rate:

- (d) Respiratory difficulties

Blood Pressure Syst.
 Dia. :

- (1) Severe
- (2) Moderate
- (3) Little/None

* Only the first ten questions are shown here. For the complete questionnaire see appendix : pages 107 to 112.

In many questionnaires, closed questions have small square boxes next to the response options. The interviewer ticks the appropriate boxes during the interview. These boxes must not be too small, about one-half centimeter square being usually the best size. Questionnaires on which these boxes are too small, are more difficult to fill in and also take longer to complete. Questionnaires with very small boxes or too little space also cause problems later at the time of the analysis; insufficient space makes reading of these forms more difficult and leads to unnecessary errors.

Example of a Questionnaire :

Page 3, as shown below, is part of a questionnaire used in a «Survey on Pregnancy and Infant Care». This questionnaire illustrates many of the points made in earlier sections.

'Survey of Accidents at Three Health Centres'

-2-

Patient
Survey No.

Initial description of injuries:

Tick where applicable

Name

<u>Affected Part</u>	<u>Laceration</u>		Simple	<u>Fracture</u>		<u>Burns</u>		Severe Bleeding/ Haemorrhage
	Moderate	Severe		Compound	Suspected	Mod.	Sev.	

Circle where appropriate

Other signs of internal injury: Yes : No

Describe: ...

Other types of Injury

(e.g. poisoning/drowning)

Describe:
.....

If poisoning, state known or suspected poison, including snake bite:

.....

4. How many weeks pregnant were you when he/she was born?

Probe:

- i) Was he early or late?
- ii) How early or late was he?

Under 34 weeks
34 < 38 weeks
38 < 41 weeks
41 weeks+

<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>

A normal pregnancy is 40 weeks

5. What type of delivery was it?

Normal
Forceps
Planned Caesar
Unplanned Caesar
Vacuum
Other

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

PROMPT

6. a) Was it a breech birth? Yes ☐ No ☒

b) Did you have any trouble before, during or after the birth?

No, not really, ... It lasted about two... hours and I was very tired afterwards, but everything really went very well.

7. What weight was he/she? *About 2 1/2 kgm.* (respondent had hoped for a heavier baby, and a son, not a daughter)

8. Did he/she have any problems when he/she was born? Yes ☐ No ☒

Probe: Was there anything 'unusual' or not quite normal about his/her birth?

If yes, what were these problems?

PROMPT for breathing, congenital abnormality, jaundice bleeding/haemorrhage

The second section of the questionnaire (see below and Appendix, pages 111 to 112) was intended for recording the circumstances of the accident (where and how it had happened). This part of the questionnaire was completed by the nurse.

'Survey of Accidents at Three Health Centres'

B: Accident Reporting Form

Accident Description: To be filled in by Nurse/Receptionist

Patient
Survey No.:

Circle where appropriate

1. Name of Health Centre: (1) Jelale
(2) Ablee
(3) Kiralla
2. Name of Patient:
3. Age: 4. Sex: M : F
5. (i) Date of accident: (ii) Approximate time
(may differ from date of reporting) of Accident
6. Place and Type of Accident:
- (a) Did accident/injury occur:
 - (1) at work?
 - (2) whilst travelling to/from work?
 - (3) at home?
 - (4) other place, unconnected with home or work

Describe:

- (5) Not known
- (b) Was it a Road Accident?: Yes No : Not known
- If 'Yes', was patient:
 - (1) a pedestrian
 - (2) cycling
 - (3) driving/riding on a motorcycle or scooter
 - (4) driver or occupant of a vehicle
- Were any other vehicles involved?:

Yes : No : Not known

Note that the first question on page 60, Question 4, is a **closed** question with four **mutually exclusive and exhaustive** options. A box is provided next to each option; the interviewer will place a tick (✓) into the box corresponding to the reply given. These boxes are of reasonable size.

The importance of collecting identification data and the use of a unique survey number for each case.

The underlined word, **Probe**, is a reminder (instruction) to the interviewer to ask two further questions should the respondent be unsure about the duration of pregnancy :

- (1) Ask the respondent to remember whether the infant was born too soon or a little late. The second question :
- (2) «How early or late ?» aims to encourage a more specific, precise answer from the respondent.


The use of unique survey numbers to preserve confidentiality and anonymity.

The boxed statement

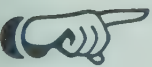
A normal pregnancy is 40 weeks

serves two functions :

- (1) to remind the interviewer of some important information which she needs to know when dealing with this type of question;
- (2) allows her to check whether statements made by the respondent are reasonable.



Both sections of the questionnaire started off by collecting «identification data», i.e. sufficient information that would identify the patient and record which of the centres was involved. Different staff would complete the two sections and therefore this information was duplicated (repeated) at the top (start) of each section, making it easy to join them as a single document after the patient was discharged. We were asked to note that at first reporting, each patient was given his or her own, unique «Patient Survey Number». The number was recorded prominently at the top right hand of every page, the same number being used throughout both sections of the questionnaire. Should, by mishap, the questionnaire come to pieces, the loose pages belonging to the same patient could easily be collected together. Another reason for using a unique «Patient Survey Number» in some studies, is to preserve the confidentiality of the patient. Questionnaires are sometimes passed for processing and analysis to other people, who ought not, and need not, know the identity of the patient. Using this type of lay-out makes it easy to preserve anonymity, i.e. not reveal identity, by blocking out the name and address. Some types of questionnaire put the identification data on a separate page with only the patient survey number appearing on the other sheets. Retaining or destroying this first page then guarantees complete anonymity.



Doctors and nurses are busy people and most of their attention is taken up diagnosing and treating the injury or ailment and caring for the patient. They will therefore be unwilling to spend much time filling in forms that are time consuming or difficult to use. In the lay-out adopted by Dr. Desai, most medical questions could be filled in by a quick circling of the appropriate item. Only question 8* was different in its

* See Appendix Questionnaire 3, page 108.

Note how the typing in Question 4 is well spaced so that the instructions to the interviewer, the questions to the respondent and the spaces (boxes) for the answers are all well laid out and clearly separated.


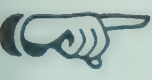
Question 4 is easy to fill in and will also be easy to read and study at the analysis stage of the survey.

Need for a convenient and quickly completed questionnaire.

Leave ample space; crowding leads to errors and irritation in use. Questions must be clearly separated to prevent their being overlooked.

Question 5 is a short, clear and direct question; there is very little chance of it being misunderstood once the six mutually exclusive and exhaustive options are read out by the interviewer. The boxed PROMPT in large, upper case letters, is a reminder that the six options are to be slowly and distinctly (clearly) read out to the respondent before the respondent answers. There is plenty of space in Question 5 for recording any comments or additional information the respondent offers.

*Question 6 consists of two questions. Question 6 (a) is a short closed question with only two options, «Yes» or «No». Question 6 (b) is an **open** question and there are three lines of space in which to record in full the respondent's comment and answer.*



lay-out and required ticking the appropriate columns for each injured part. The sequence of the information required also helped to speed up filling in; the question sequence was the same as the order in which doctors examine the patient. The longer interview, about the circumstances of the accident, was left to the nurse. Even here, most questions only required the applicable items to be circled. Where it was necessary to write something down, plenty of space was left to do so. Space is important; any crowding can lead to circling and ticking the wrong items or later misreading the items to which the ticks and circles apply. This is the reason why such response options (choices) as

Yes

No

N.K.*

are well spaced and also the reason why the printing of these same options in the compact form of : Yes/No/N.K. should be avoided.

Dr. Desai also left plenty of space between the questions, thus ensuring that no question could easily be overlooked. Leaving a few blank (empty) lines between questions not only gives a better appearance, but also allows the interviewer to read clearly any comments or reminders of which he is to take note. Psychologically, an overcrowded lay-out leaves the impression that the completion of the form is a lot of work and cannot be done within the time allowed.

* In many questionnaires the following short-hand is often used :

- (i) N.K. = Not Known
- (ii) N.A. = Not Applicable
- (iii) D.K. = Don't Know

Question 7 is a simple enquiry with space to write down the weight. Note that the interviewer recorded that the respondent was not too sure of the weight; she did this by using the phrase «about 2.5 Kgm», thus making it clear that the answer is only approximate. The interviewer had also written down, very briefly, how the respondent felt about the weight and that she really wanted a son.

In Question 8, we have a question followed by a **conditional question** if the answer to the first part indicates a troublesome (difficult) birth. The interviewer is reminded of the availability of a permitted alternative question, i.e. to **probe**, should the respondent be unable to answer the original question. The interviewer is then reminded further, that if there is anything abnormal, she is to prompt and is specifically to ask about the conditions listed in the bottom box. Had there been any problems, then the interviewer would have circled, i.e. put a ring around, the appropriate abnormal condition. Question 8 is a complicated question but the lay-out and instructions clearly guide and remind the interviewer of each step she is to follow.

Question Sequence

For a survey interview to be successful, the respondent must :

- (1) understand, even if only very superficially, what the survey is about and why she is being asked to answer questions.*
- (2) be motivated to participate (take part) in the interview.*
- (3) have her interest maintained throughout the interview. This means she must not be asked so many questions as to tire her and she must, at different stages of the interview, be given some additional information to maintain her motivation and willingness to help.*
- (4) enjoy the interview so that at the end of it the respondent feels she has had a worthwhile discussion about subjects that are important and interesting.*

Dr. Chan Yip then returned to the subject of getting the sequence of questions correct. In a purely medical questionnaire this sequence was often guided, as we had already seen, by the order and sequence in which the examination was performed in clinical practice. However, in surveys dealing primarily with social or psychological enquiries the question sequence is not so easily decided upon. Such social or psychological surveys often divide their interviews into several distinct sections, each dealing with a logically distinct problem, and very similar to the way Dr. Desai had divided his questionnaire into a «medical section» and a section called «accident description». Within distinct questionnaire sections, it is important to organise (set out) questions in a logical order and progress (go) from the simpler, easier questions to the more difficult. Questions about events or activities about which respondents do not like talking, or which embarrass them, must be placed in a well chosen and suitable part of the questionnaire. For instance, questions about venereal (sexual) disease or about illegal drug taking must only be asked after the respondent has been carefully prepared for such questions. Such difficult questions are often placed later in the relevant section of the questionnaire, rather than early on.

One such example of a sensitive (difficult) question occurs in Dr. Desai's Question 6(c), in the «Accident Description» section, where enquiry is made as to whether or not a criminal act led to the injury. Dr. Chan Yip felt the place for this question might have been a little later, say after question 9, although some might object to such an important topic being put at the very end of the questionnaire. Interviewers, despite being told not to, often speed up the interview towards the end, with the result that the last few questions are not given the same care and attention as the earlier ones. There are no simple solutions or fixed rules how to proceed. What is needed is lots of practical commonsense and careful thought as to what will work best in the local situation.

The survey interview must therefore be planned as a whole and not just considered as a series of isolated questions.

Examples of useful and time saving jump instructions.


The sequence during the Interview

The sequence (order) in which information is given to the respondent, the sequence of topics to be covered and the sequence in which the questions are asked, are of great importance if the interview is to be an interesting experience for the respondent. This sequence varies with different surveys, but frequently the interview is planned to run as follows :

Example of using space efficiently without cluttering and overcrowding.


Example of using comments to clarify the meaning of the terms and words used.

1. The interviewer introduces herself and briefly explains what the study is about.
2. The respondent is assured that :
 - (a) the information is confidential
 - (b) the interview will take no longer than some stated time.




Another interesting feature of the lay-out is the positioning of the jump instruction which is inserted at the end of question 7(b) to avoid wasting time going through questions that no longer apply.

One feature Dr. Chan Yip did not like was that question numbering did not continue from the Medical Section through to the Accident Description section; in the Accident Description section the numbers started again from 1, 2, 3, and so on. He recognised that this was done so as not to confuse the nurses. On the other hand, once the two sections were put together after the patient's discharge, the completed document had confusing numbering.



In order not to make the questionnaire too bulky and long, some question parts were placed alongside each other, as was the case for 7(a) and 7(b); similarly 7(c) and 7(d). To draw attention to this, a short vertical straight line was placed in the centre of the page, separating out the two components (items).



Dr. Chan Yip was impressed by the brief, but helpful, comments to the «interviewer», who in this study is either the doctor or the nurse. For instance, in the Medical Section, question 11(c) and (d), a short explanation is given how the survey planners interpret (use) the terms «discharged», «accepted as out-patient» and «minor» and «major» surgery. These terms may normally be used differently by doctors and survey planners; such simple comments or instructions can therefore do much to avoid misunderstandings. Equally helpful are the comments in the Accident Description form* where, in question 5, it is pointed out to the nurse that date of reporting and date of occurrence are not always the same. In question 6(c) and 9, examples of typical answers are given to make clear to the nurse just what is required and how she might write down the information she gets about the accident.

* See footnote, page 71.

3. *The respondent is asked to give full identification, such as name, address and so on.*
4. *The interviewer introduces each new section of the questionnaire by a few simple sentences which aim to :*
 - (a) *very briefly give some reasons for wanting to obtain information on this next subject (topic).*
 - (b) *give the respondent a little rest from continually answering questions.*
 - (c) *allow the respondent to switch (turn) her thoughts from the previous section to the new topic.*
5. *Within each section, questions are put in a logical order and often progress (go) from the simpler, easier questions to the more difficult.*
6. *Questions about sensitive or embarrassing events or activities must be placed in a well chosen and suitable part of the questionnaire.*
7. *Ending the interview by some polite and thankful remarks, including :*
 - (a) *a renewed stress on the importance of the study*
 - (b) *a mention that confidentiality will be maintained.*

Finally, Dr. Chan Yip emphasised that this questionnaire * was produced on an ordinary typewriter and did not require expensive printing. The use of upper and lower case letters, underlining or enclosing text in a box gives sufficient emphasis to the various enquiries the interviewer is to make. The well spaced lay-out in this questionnaire left plenty of room for writing comments and answers without crowding and without causing confusion.

* The term questionnaire should strictly speaking be used only for situations in which the respondent is asked to provide answers to specific questions during an interview or when sent a postal questionnaire to complete. The term FORM should be restricted to situations in which the investigator notes facts and observations made by himself. In survey practice the recording sheets often serve both functions. The terms «questionnaire» and «form» are, as a result, frequently used loosely and interchangeably.

MEMORY AND RECALL

Helping the Respondent Remember

«Recall», i.e. remembering past events, is a major survey problem. Most medical surveys ask questions not only about present activity and state of health but also about events and conditions in the past.

Remembering, i.e. recalling the past, is often difficult and errors of recall are frequent. Mistaken or faulty memory can take different forms :

1. *The respondent has no recollection at all of some previous event or experience, i.e. he has completely forgotten.*

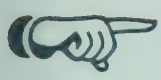
Hospital records are often selective and unrepresentative of the full spectrum of illness, severity and response to treatment.

2. *There is only partial recollection, i.e. the respondent remembers some aspects of what happened, but not everything.*
3. *Two or more past events are telescoped, i.e. joined and pushed together, so that the respondent thinks of several separate events happening at different times, as a single event.*
4. *The events are remembered correctly, but the respondent confuses when or where they happened.*

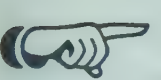
Many factors affect memory but the following are common reasons for incorrect recall :

SPEAKER : Dr. J. Ashma

SUBJECT : Memory and Recall



Dr. Ashma started his talk by reminding us how difficult it was to find out the effectiveness and benefit of medical treatment, especially in the case of long lasting illness, the after-effects of surgery or chronic disease. The best way to find out was to carry out «follow-up» studies, i.e. studies where as many patients as can still be traced (found), are recalled to the clinic or visited. It was quite wrong to rely on only those cases who, of their own accord, came back for further treatment or medical check-up. Patients who did come back were mainly those with special problems or who could afford to come for additional treatment. Patients who were poor, lived too far away, and who became despondent or no longer believed that treatment could help them, would, in general, not report back. Thus, most patients were seen at hospital only in the acute phase of illness or injury, and of these, only a selected, unrepresentative group returned for further examination or treatment. The hospital and the doctors would know little or nothing about the condition of those who did not return for a check-up.



For these reasons Dr. Ashma had collaborated with Dr. Desai to undertake a follow-up study of accident cases that reported to Kiralla hospital a year ago. Ideally, Dr. Desai and he would have liked to do a similar follow-up study of the other two centres also, but the resources were insufficient. The two principal objectives in this follow-up study were reflected in the questionnaire*. The aims were : firstly, a year afterwards, to establish what effects the accident had left in terms of disability, pain

* See Appendix : Questionnaire 4, pages 113 to 115.

1. *The age of the respondent; older people are more forgetful.*
2. *The time that has elapsed (passed) since the events took place.*
3. *The importance of the events, or the pain and distress caused, to the individual and his family.*

Respondents can be helped to remember past events and conditions in three ways by :

- (a) Prompts**
- (b) Probes**
- (c) Preliminary questions**


1. **Prompts :** *The interviewer prompts, i.e. she reads out, a list of possible answers from which the respondent is to choose. The prompts in question 5 and the second part of question 8 in the example questionnaire on page 60 are of this kind.*

Questionnaire designed to ensure person seen at follow-up is the same patient as treated some time ago.

2. **Probes :** *The interviewer probes i.e. she asks additional questions which help to clarify the answer given to the original question. The two probes in question 4 and the first part of question 8 of the example questionnaire are of this kind.*
3. **Preliminary Questions :** *The questionnaire can be designed to put a sequence (series) of short questions, each of which is preparing the respondent and leading her up to the critical (important) question. As a rule, the interviewer only reads the questions as they are printed on the questionnaire; she does not prompt or probe further unless she is instructed to do so as part of the preliminary questions.*

suffered and employment; the second and quite different aim was to collect information on how well people remembered their hospital experiences after a long time, which in this study was one year. In his present talk, Dr. Ashma was concentrating on the second objective, i.e. the «memory and recall» aspect of his survey.

Dr Ashma of course appreciated that his follow-up study was not a proper prospective study. In a real prospective study, the second part, i.e. the follow-up enquiries, would have been planned at the time Dr. Desai was planning his Accident Survey at Three Health Centres. If the follow-up study had been conceived (thought of) at that time, some additional questions would have been added and some might have been worded differently so as to make comparison easier between what the patient felt and thought then with what he feels and remembers now. However, even without the requirements of a prospective study being satisfied, Dr. Ashma was hopeful some useful and interesting results would emerge from his follow-up survey.



In this follow-up survey, for each of the previous accident victims, the interviewer was handed a questionnaire* containing the patient's previous survey number, name, sex and date of birth or age. The interviewer was able, thereby, to check that the person they now interviewed really was the accident patient of a year ago. The interviewer was instructed to compare carefully the patient's date of birth with that recorded in the hospital files a year ago, and to record any change of name that may have occurred meanwhile. Age or date of birth were sometimes recorded incorrectly at the hospital and this was not always the fault of the patient. Even the sex of a patient has been known to be incorrectly recorded in hospital files.

* Only the first page of the questionnaire is shown here. For the complete questionnaire see Appendix : Questionnaire 4, pages 113 to 115.

Recall and Follow-up Studies.

Relying on memory recall or on old clinical records is never entirely satisfactory, but it is frequently done because it is often the cheapest and quickest method available to the researcher; sometimes it is the only method possible. However, knowing the dangers and limitations inherent in memory dependent questions, it is better to plan a prospective study. A prospective study is basically a follow-up and a comparison study in which appropriate information is collected at the start of the study and then compared with similar data collected at a later period from the same individuals. The interval between the first collection and the follow-up collection of data is often quite long, often a year or more. The methods of collecting the required information varies, but includes surveys and clinical records. The essential requirements are that :

- (i) the same cases (patients) are studied at both times, so that changes in the individual's condition or his behaviour can be noted.*
- (ii) All, or at least a high proportion, of the original cases studied can still be found and studied at the follow-up.*

As an illustration, consider the need to find out whether or not a community educational program about mother and child care, about when and how to wean, and so on, had been successful. There are basically three ways in which such a study can be done :

- (i) An interview survey amongst young mothers with two or more children. Such mothers could be asked how they are caring for their babies now and what they did with their previous children.*
- (ii) An interview survey amongst young mothers and the information so obtained compared, as far as possible, with the clinic record of their previous births and child care.*
- (iii) Plan a prospective study where suitably chosen questions are asked and records kept at each birth; in other words, a proper follow-up study.*

Methods (i) and (ii) will rely heavily on the mother's memory and recall. Many mothers will not remember clearly the birth weight of previous children, the length of gestation, the age when weaning started or the type of food given during weaning. Where clinic records exist, they may help in obtaining some of the past information, but probably not much. As a rule, clinic records are kept for the care of the patient, diagnosis and treatment and for administrative needs, not to answer research or study questions. Hence clinic records, even when they can be found, may be of limited use.

Accident Follow-up Study

Interviewer:

About a year ago you had an accident and you went to Kiralla hospital for treatment. During the month in which you were injured, over 100 other people also reported to this hospital with accident injuries. We are now visiting all of these patients to find out how they have recovered from their injuries and how the injury has affected their lives. I would be grateful if you could spare some time to answer a few questions about how your injuries are now.

Identification:

1. Your Name:
2. Your Address
.....
3. Can you please tell me your
date of birth/age:
4. Sex: M : F

Check Data:

- Name:
Sex:
Previous Survey No.
Previously reported date of
birth/age:

5. Can you tell me what your injuries were?
(list not more than 5)
1.
2.
3.
4.
5.
6. (a) Which of the injuries you received
has affected you most?
1.
- Which has affected you second most?
2.
- (b) Why do you consider these to be your worst injuries?
-
-

The third method, that of a prospective follow-up study, is ideal because it places least reliance on the mother's memory. A follow-up study of course requires :

(1) long term planning

(2) resources to do the follow-up

(3) sufficient information to be recorded at the initial interview or examination enabling the organiser to trace (find) all, or nearly all these cases at some later «follow-up» date.


The follow-up may sometimes be a year or more later, but it is usually at some fixed interval after the initial interview.

Example of a question relying on correct recall; it is also an example of information that can be checked, to some extent, against earlier records.


Comparing the doctors view of the patients condition with the patient's own assessment of his condition.

Patients often experience difficulty remembering facts related to time, such as «how long ago ?» and «how long did it last ?».


Ill-effects, pain and some disability can remain long after clinical treatment ceases. Often, very little is known about these problems.




Question 5 is a simple, direct memory question about the patient's injuries, the answers to which can be compared with Dr. Desai's earlier questionnaire and the clinical records a year or so back.



Question 6 (a) and (b) assesses the patient's attitude to his/her injuries in two ways. Firstly, the list of injuries mentioned by the respondent can be compared with what the respondent considers to be the worst injuries - are the two injuries listed by the patient in question 6, also listed in Question 5, and if so, do they appear near the top of the Question 5 list? Secondly, Question 6 is also of interest because it may reveal that for many patients, the injury that causes most anxiety or pain and discomfort is not necessarily the most medically threatening or acute injury. The clinician and the patient may have very different rules (criteria) for judging illness and injury, and information on this aspect will be provided by Question 6.



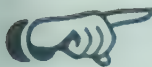
Questions* 7 and 8 aim to test the patient's memory on his or her hospital stay. Many patients retain (keep) no clear impression of how long they were in hospital and some patients forget altogether that they were kept in hospital. Time and intervals of time are particularly subject to memory lapses and distortions. Note also the jump instruction in Question 7; if the patient does not remember being kept in hospital it is then no use asking questions 8 and 9.



Question 10 aims to collect information on how long it took before the patient felt he or she could do their normal work. This question also allows the investigator to examine the relationship between type and extent of injury and when normal health and activity is regained. This question is quite different from Question 11 which enquires whether or not he got his previous job back, and if not, the reasons for not going back to his former employment.

* See Appendix for the full questionnaire, pages 113 to 115.

Preliminary questions have prepared the respondent to recall, remember and to think again about what happened in the past.



All these questions, 5 to 13, not only provide important information for the study, they also prod (stimulate into action) the respondent's memory as to what happened a year ago. After this «reminding» by these preliminary questions the respondent should be better prepared and ready to talk at some length about the circumstances of the accident when answering questions 14 and 15. Interesting comparisons can then be made between what the patient remembers and thinks about the accident a year later and what he reported at the time he was seen at the hospital, soon after the accident.

SOME GENERAL CONSIDERATIONS

THE USE OF PICTURES

The use of pictures, photographs or drawings, can be very helpful in a survey. The interviewer is instructed to show a particular picture to the respondent at a specific stage of the interview and then to ask the respondent questions about the picture. These pictures must be of a reasonable size and of good quality; colour photographs are often helpful. Size and quality is of importance because not all respondents see equally well.

This method of interviewing is particularly useful when the questions are about situations that are difficult to describe in words. Showing pictures and then asking questions about them is a frequently used method that aims to :

- 1. test the respondent's knowledge about health and disease*
- 2. establish the respondent's attitudes and opinions as regards certain situations, as shown in the pictures*
- 3. establish the respondent's preferences between available alternatives, as shown in the pictures.*

An example of testing knowledge and information is given in the case of a survey in which the respondents are shown three or four photographs of patients showing typical and well developed symptoms of common nutritional deficiencies such as kwashiorkor and rickets. Questions then follow, asking whether the respondent recognised, i.e. could give a name to, the disorder, knew what caused it and what might be done to prevent or cure it.

SPEAKER : Dr. L. Retlaw

SUBJECT : Some General and Practical Considerations

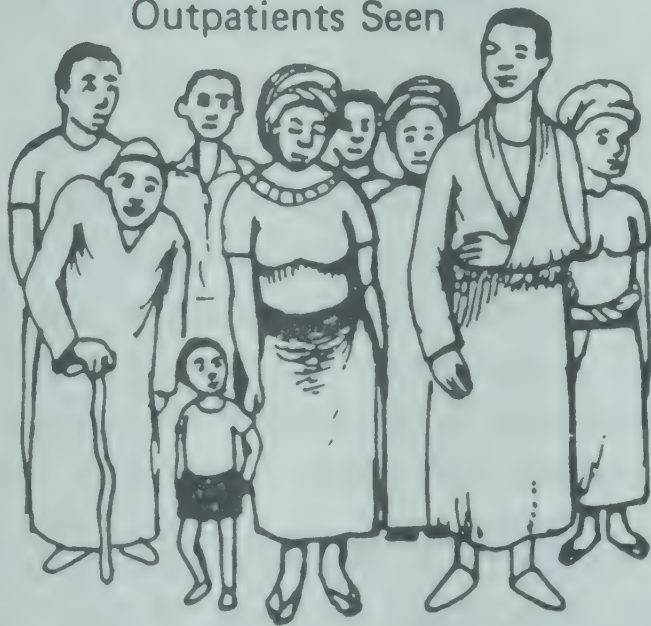
The speakers at this session, Dr. Retlaw declared, had covered many different and important aspects of questionnaire design. Not surprisingly for such a large subject, some aspects had not been covered. For instance, in many surveys the interviewer presents the respondent with a written list to read or some pictures to look at and, for a while, the interview then centres (concentrates) on this list or these pictures.

The use of lists, of course, pre-supposes that the respondent is literate and for this reason lists are not always applicable. However, pictures, drawings or photographs, are often useful. Dr. Retlaw referred to a set of diagrams designed by WHO and used in Gambia, West Africa, as a simple type of information recording sheet, (See pages 86-87). Each time the primary health worker attended to a case whose symptoms were those shown in the diagram, the health worker would mark (fill in) one of the zeros below the applicable diagram. By counting the number of filled in zeros, information could be collected on the frequency of births, deaths and disease reporting at the health station within a given period. Clearly, if someone wanted to do a study of disease reporting at a health clinic then this was one way of doing it.

PHC VILLAGE HEALTH WORKERS RECORDING FORM

NAME _____ VILLAGE _____ DATE _____

Outpatients Seen



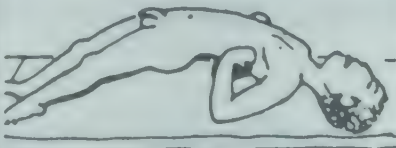
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Malnourished child



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Child with tetanus



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Child with whooping cough



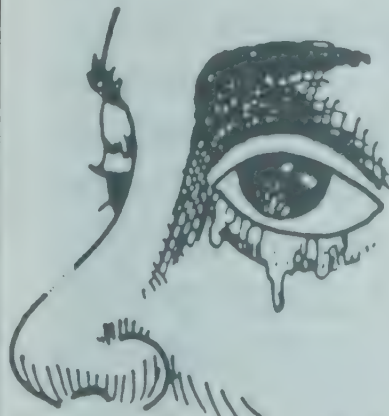
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Child with measles



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Eye infection



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0000 0000 0000 0000

Chest infection in child



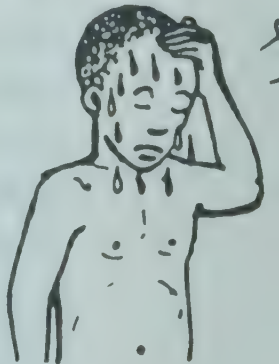
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Child with diarrhoea



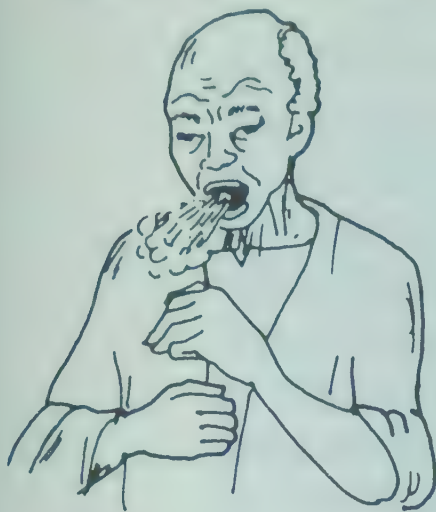
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Child with malaria



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Adult with lower respiratory infection



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Adult with malaria



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Adult with diarrhoea



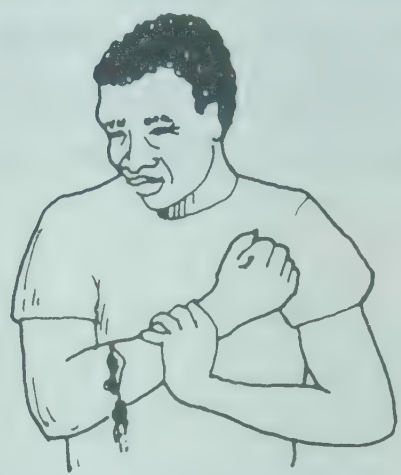
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Referrals to Health Center



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Wounds/Abrasions



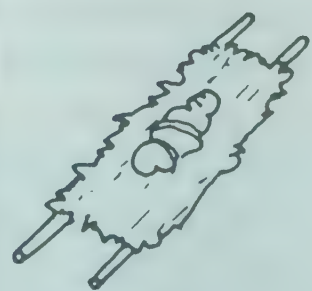
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Births



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Deaths



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HELPING THE INTERVIEWER

*The interviewer is greatly helped by a well laid-out questionnaire and by clear and precise instructions to guide her during the interview. However, printed instructions alone are not enough. All interviewers **must** be given training in the use of the questionnaire before the full survey starts. They must be taught how to approach people, how to read out the questions, what to say at the start and how to end the interview. They also need guidance on how to behave (act) and what to say when the respondent is unwilling to take part or does not wish to continue the interview. Many interviews are best conducted (done) by speaking to the respondent alone, without anyone else listening or being present. Arranging this can sometimes be difficult, but the interviewer can be told and have demonstrated several ways by which it can be achieved. The unexpected can arise at any time during an interview and whilst training cannot prepare the interviewer for all possible situations, it can prepare her for many of the problems she is likely to meet.*

PILOT STUDIES

A questionnaire should not be used without it being tried out (used) during at least one, and preferably several, small pilot (testing) studies. A pilot study will always reveal practical difficulties in the lay-out, as well as ambiguity in the wording of the questions and interviewer instructions. Pilot studies of only 10 or 15 interviews will show up most of the difficulties that had not been foreseen. Respondents will inevitably ask questions or will give answers which were not anticipated (expected) and which require changes in, and improvements to, the questionnaire.

Dr. Retlaw could also remember that some years ago a survey set out to measure or test how much people knew about health hazards (dangers) and what might be done to avoid them. He remembered seeing a set of six or so photographs which were given to the respondent to look at during the interview; all the pictures dealt with people collecting water, some from a well, some from a river, and some from the communal tap. In each of the pictures something occurred that presented a health hazard and the respondent was asked if she could point out these hazards. For instance, in the picture of water being taken from the river, it showed a dog paddling (swimming) close by, a young boy urinating and cattle drinking only a few yards upstream. There were thus three «wrong» and «unhealthy» things that the respondent could mention after looking at this picture. The next picture was of a well at which women were collecting water. This picture showed a refuse dump close by, birds perched in a tree overhanging the well and a small boy about to drop something down the well.

Such pictures made it much easier for the interviewer to do her work. Good, clear pictures saved a lot of time and talking and of course, every respondent saw the same pictures, (i.e. received the same information) before having to answer questions about them.

Such pictures are an excellent means of testing what information or opinions respondents have about a situation. Dr. Retlaw recommended using pictures, and felt this should be considered more frequently for survey interviews.

A questionnaire will usually need to be drafted and tested, and then redrafted again. In a complex survey, the questionnaire may need to be re-tested four or five times before it is satisfactory and ready for use. The interviewers should take part in these small pilot studies, if possible. The pilot studies allow the survey planner to become aware of any shortfall in the design of the questionnaire.

A small pilot study will also indicate how long an interview takes and how long it usually takes to go (travel) from one interview to the next. The information, on the time taken, is invaluable in deciding on how many interviews can be managed by an interviewer in a day or a week. Without this information it is not possible to properly estimate the resources needed to carry out the survey.

A small pilot study will also provide information on whether respondents become fatigued (tired or bored) during the interview. Respondents become tired or listless for several reasons, such as the interview is too long, the questions asked do not interest the respondents, or the interviewer is not giving them enough information to retain (hold) their attention. Noticing adverse (unfavourable) respondent reactions (behaviour) during the pilot studies, gives the survey organiser the opportunity to find out why the respondents react unfavourably and to take steps to improve upon the interviewing, the general survey methods and the questionnaire.

There was no fool-proof way of knowing beforehand how good a question was, or how well a questionnaire stood up to use during interviewing. The only effective way to find out was to test it «in the field», i.e. interview a few people under conditions similar to those that would be encountered during the survey. This was, of course, the same thing as doing a small pilot study. Pilot studies not only tested the questionnaire and each question, but also gave the survey organiser practical experience of what other difficulties might be expected. This experience was invaluable in the training of the interviewers. A fundamental error was to assume that a nurse or doctor, because they dealt and spoke with patients every day, would automatically make good survey interviewers, without any initial training being necessary. This was quite mistaken. We were asked to remember that patients come to the doctor and nurse for help, whereas, in the survey situation, it is the interviewer who is seeking co-operation and information from the respondent. These two situations are as different as night and day. No survey could be expected to give good results without proper interviewer training before the survey started.

Finally, Dr. Retlaw pointed out that questionnaires were often printed. If a good printer was available, the results could be both attractive and impressive. However, printers were relatively expensive and did not always get the work done by the date promised. A well typed questionnaire could be as attractive as a printed form, and cost much less. Even if the final questionnaire was to be printed, it was never justified to have it printed before having undergone several revisions and a pilot study.

Summary

Nearly all interview survey questionnaires consist of four basic components (parts) :

- 1. Guidelines on the introduction to, and the ending of, the survey interview.*
- 2. A section on the identification of the study unit and its location.*
- 3. The main body of the questionnaire, which may subdivide into separate sections for each topic studied.*
- 4. Interviewer guidelines, usually dispersed (spread) throughout the questionnaire.*

The following points need to be stressed for the questionnaire as a whole, as well as for the separate sub-sections :

- 1. Check on the use of open and closed questions.*
- 2. Check on any ambiguity of questions and words, on clarity and simplicity.*
- 3. Check on the logical order of sections and of the questions within sections.*
- 4. Check whether or not, for the type of respondent the survey will canvass (meet), the questions are reasonable in terms of :*
 - (i) the knowledge required*
 - (ii) the reliance on memory and recall*
- 5. Check on lay-out and coding.*
- 6. Ensure that all questions essential to meet the aims of the study are being asked, none being omitted, including all necessary identification data.*
- 7. Weed out and discard all redundant questions not essential for meeting the aims of the study.*

Finally, this draft questionnaire must then be tested during the interviews, both amongst friends and colleagues, and finally under field conditions in a pilot study.

These guidelines, if consciously followed, should ensure an adequately designed and efficient questionnaire.

APPENDIX

Some Specimen Survey Questionnaires

- | | |
|--|--------------|
| 1. «A Survey of School Performance» | Dr. K. Singh |
| 2. «Survey of Eating Houses» :
<i>Inspection Questionnaire</i> | Dr. Chan Yip |
| 3. «Survey of Accidents at Three Health
Centres»
A : Medical Reporting Form
B : Accident Reporting Form | Dr. J. Desai |
| 4. «Accident Follow-up Study» | Dr. J. Ashma |
| 5. «Health Centre Survey of Parasitic
Disease amongst Young Children» | Dr. A. Xuma |
| 6. «Water Inspection Form» | Dr. J. Ashma |
| 7. «Household Survey - Samoa» | W.H.O. |

Questionnaire 1

'A Survey of School Performance'

Name of School:
.....
.....

Class Identification:

Name of Teacher interviewed:
(The teacher should be involved in teaching this class)

Section I:

Information from Class Register

Name of Pupil: Date of Birth:
(age if date of
birth not known)
Sex: M : F

Home Address of Pupil:
.....
.....

'A Survey of School Performance'

-2-

Section II:

Questions to Teacher

- 1. Date when child first registered with this school OR number of years at school if first attendance date unknown
- 2. How many school days has the child missed (for any reason) during:
 - (i) the last year (last 12 months)
 - (ii) the year (12 months) before that

Please check register carefully.

- 3. In your view, have these absences from school affected the child's learning and progress?
 - 1. Yes; the child has not caught up
 - 2. Yes; but the child has since caught up with others
 - 3. No; not much/not at all
 - 4. Don't know/Difficult to assess

If affected a 'lot' or 'serious' could you briefly describe in what way and to what extent the child's progress is adversely affected compared with that of other children in the class.

.....

.....

'A Survey of School Performance'

-3-

4. Are the absences from school primarily due to:

1. Illness
2. Poverty
3. Child's help required at home
4. Other reasons

Please state:



5. Don't know/not sure

5. Do you know of any physical or mental handicap that hinders this pupil's progress at school?

No : Yes

If 'yes' please specify:

.....

6. Do you know of any social or domestic problems (e.g. extreme poverty or only one living parent) that hinders this pupil's progress at school?

No : Yes

If 'yes' please specify:



7. Does pupil have both parents living at home?

1. Yes
2. No
3. Don't know

'A Survey of School Performance'

-4-

8. Have either of the parents been to see you, or have they enquired about their child's progress at school?

- 1. Yes often
- 2. Yes, sometimes
(less than three times a year)
- 3. No
- 4. Do not know/
Cannot remember

9. Have you any general comments to make about this child's behaviour, ability or progress at school?

.....
.....
.....

Interviewer's Decision: Is the child to be included in this study? Yes : No

If No, indicate reason(s) for exclusion:

.....
.....

'A Survey of School Performance'

-5-

Section III: Questions to Pupil

[Interviewer must arrange to see each child separately and alone; start with a short, friendly conversation before asking questions]

Interviewer: 'I would now like to ask you some questions about yourself and school. Do not be afraid; just tell me exactly what you think'.

- | | | |
|----|---|---------------------------------------|
| 1. | How do you come to school? | 1. Walk, but not very long |
| | | 2. A long walk (more than 15 minutes) |
| | | 3. Take a bus |
| | | 4. By bicycle |
| | | 5. Other means |
| 2. | At what time do you leave home in the morning to get to school in time? | |
| 3. | How do you find school work? | 1. Easy |
| | | 2. Sometimes easy |
| | | 3. Difficult |
| 4. | What subjects do you find difficult? | 1. Reading |
| | | 2. Writing |
| | | 3. Arithmetic |
| | | 4. None/all easy |
| 5. | What subjects do you like best? | |
| | | |

'A Survey of School Performance'

-6-

6. What subjects do you like least?
.....
7. Do you find your homework easy? 1. Yes, all home work is easy
(If indecisive answers gently 2. Yes, most homework is
probe) easy but not

.....
(state subject
type of homework)

3. Difficult/cannot do it
8. Do your parents ask how you 1. Yes; often/every day
are getting on at school?

(If indecisive answers, 2. Yes; only sometimes/not
gently probe) every day

3. No; hardly ever/not often
9. Do your parents help you with 1. Yes, often
your homework? 2. Yes, only if I ask them

3. Sometimes/not often

4. No
10. Do you get much help with Yes : No
your homework from anyone
else? Who is this?
(State relationship to child,
e.g. older sister or aunt)

'A Survey of School Performance'

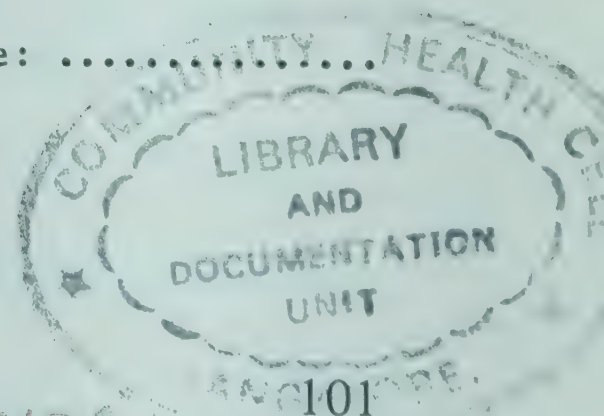
-7-

11. Can your parents read?
1. Both can read
 2. Father only
 3. Mother only
 4. Both cannot read
 5. Don't know
12. Can your parents write?
1. Both can write
 2. Father only
 3. Mother only
 4. Both cannot write
 5. Don't know
13. Do your father or mother read the newspaper sometimes? Yes : No
14. What kind of work does your father do most of the time?

Section IV

Results of Performance Tests

- (a) Reading score:
- (b) Writing score:
- (c) Arithmetic score:



TM-110, N86

06096

Questionnaire 2

Survey of Eating Houses:

Inspection Questionnaire

City Block Number:

Restaurant Name:

Restaurant Identification Number:

Date of inspection:/...../.....

Day - Month Year

Name of person interviewed:

General Background

1. At the busiest time of the day, what is the maximum number of persons the restaurant can serve:

- (1) up to 10 persons
- (2) 11 up to 20 persons
- (3) 21 up to 40 persons
- (4) 41 up to 60 persons
- (5) more than 60 persons

'Survey of Eating Houses'

-2-

Identification

Number:

2. Number of persons working in the restaurant at present
(including owner if actively working on premises)
- (a) Cooks/kitchen staff
 - (b) Waiters/waitresses
 - (c) Cleaning staff
 - (d) Other personnel
3. To what extent is the food you serve prepared on these premises?
- (1) Nearly all food prepared on the premises
 - (2) Most food brought in from our kitchens in adjoining/
nearby premises and reheated if necessary
 - (3) Most food brought in by outside caterers (or own
kitchens if more than a street away) and
reheated as required
 - (4) Other arrangements: Please describe:
.....
4. Does the restaurant serve its main meals at regular hours?
- (1) Full meals at fixed hours only - closed at other times
 - (2) Fixed meal hours, but snacks and light meals served at
other times
 - (3) Full meals served at any time
 - (4) Full meals and snacks/light meals served at any time

'Survey of Eating Houses'

-3-

**Identification
Number**

INSPECTION FORM

5. Kitchen Conditions:

- | | |
|---|---|
| (a) Floor | (1) Floors clean and well swept |
| | (2) Small amount of dirt, scraps
or refuse on floor |
| | (3) Unacceptable amount of dirt,
food scraps or refuse on floor |
| | |
| (b) Work-surfaces and Food preparation areas: | |
| | (1) Clean evidence of regular cleaning |
| | (2) There is evidence of moderate ac-
cumulated dirt or grease in recesses |
| | (3) Very unhygienic and widespread
accumulation of dirt and grease |
| | |
| (c) Cooking Utensils: | |
| (pots and pans,
mincers, chopping
block, ladles,
etc.) | (1) Clean/there is evidence of
polishing or scouring |
| | (2) Adequately clean but no evidence
of regular scouring |
| | (3) Dirty/there is evidence of old
encrusted food remains |

'Survey of Eating Houses'

-4-

Identification
Number

6. Facilities and Materials for cleaning premises

- | | |
|--|--|
| (a) Separate sink and drainage facilities (for washing floors, tables, etc). | (1) Yes; adequate for size of eating house |
| | (2) Yes; but inadequate for size of eating house |
| | (3) No |
| (b) Hot water for general cleaning purposes | (1) Yes, sufficient |
| | (2) Yes, but insufficient |
| | (3) No separate hot water |
| (c) State of cleaning materials (mops, brooms, brushes, buckets) | (1) Adequate for the purpose |
| | (2) Adequate for the purpose but in poor state |
| | (3) Very inadequate in every way |

Comments on any of the above:
.....

'Survey of Eating Houses'

-5-

Identification
Number

7. Toilet and Washing Facilities:

- (a) Number of toilets for personnel
- (b) condition of toilets (1) clean and undamaged
(2) clean but cracked/slightly damaged
(3) unacceptable
(dirty and/or not functioning)
- (c) Number of wash basins/sinks for personnel
(in or near toilets)
- (d) condition of wash basins/sink for personnel
(1) clean and undamaged
(2) clean but cracked/slightly damaged
(3) unacceptable
(dirty and/or not functioning)
- (e) soap and clean towels adequate for washing hands?
(1) Yes; adequate
(2) Yes; but not sufficient
(3) No/very inadequate or dirty

8. Food Storage Conditions:*

* Only part of the questionnaire, the first seven questions, were circulated at the workshop.

Questionnaire 3

'Survey of Accidents at Three Health Centres'

A: Medical Reporting Form

Medical Section: To be filled in by Doctors in Charge of Patient

Patient Survey No.

Circle where appropriate

1. Name of Health Centre:
- (1) Jelale
(2) Ablee
(3) Kiralla
2. Arrival at Centre:
- (i) Date:
(ii) Time:
3. Name of accident patient:
(for non-accident cases use pink forms)
4. Address/location/other identification
5. Age of Patient
6. Sex of Patient
7. Condition of patient on arrival:
- | | |
|---|---|
| (a)
<div style="margin-left: 40px;">(1) ambulant
(2) requires support
(3) stretcher case</div> | <div style="margin-left: 40px;">(1) fully conscious
(2) confused/concussed
(3) unconscious
(4) dead</div> <div style="margin-top: 20px;">If 'Dead', go to 12.</div> |
|---|---|
- | | |
|--|---|
| (c) <u>Pulse Rate:</u>

<div style="margin-left: 40px;"><u>Blood Pressure</u> Syst.:
Dia.</div> | (d) <u>Respiratory difficulties:</u>

<div style="margin-left: 40px;">(1) Severe
(2) Moderate
(3) Little/None</div> |
|--|---|

'Survey of Accidents at Three Health Centres'

-2-

Patient
Survey No.

8. Initial description of injuries:

Tick where applicable

Name

<u>Affected</u> <u>Part</u>	<u>Laceration</u>		Simple	<u>Fracture</u>		<u>Burns</u>		Sever Bleed Haemor
	Moderate	Severe		Compound	Suspected	Mod.	Sev.	

Circle where appropriate

9. Other signs of internal injury Yes : No

Describe:

10. Other types of Injury:

(e.g. poisoning/drowning)

Describe:

.....

If poisoning, state known or suspected poison, including snake bite:

.....

'Survey of Accidents at Three Health Centres'

-3-

Patient
Survey No.

11. Initial Investigations and Management

(a) Emergency resuscitation: Yes : No

(b) X-ray taken: Yes : No

Results of X-ray

(c) Hospitalisation:

(1) discharged (no re-call appointment)

(2) accepted as outpatient (re-call appointment given)

(3) accepted as inpatient

(d) Surgery required: Yes : No

If Yes, was surgery

(1) minor (performed in outpatient clinic)

(2) major (theatre operation required)

(e) Blood transfusion given: Yes : No

(f) Other initial investigations/management Yes : No

Describe

.....

12. Name of Clinician at Initial Reporting

'Survey of Accidents at Three Health Centres'

-4-

Patient
Survey No.

For inpatients only: (to be completed at discharge)

13. (a) Date of discharge:
- (b) Discharge Status: (1) no further treatment
(2) recall as outpatient
(3) inpatient at other hospital/
medical care
(4) deceased
- (c) Any serious impairment at time of discharge? Yes : No
If yes, describe:
- (d) Is impairment likely to be permanent Yes Possibly : No
14. Name of Ward Clinician

For Out-patients only: (to be completed at discharge)

15. (a) Date of final discharge:
- (b) Any serious impairment at time of discharge? Yes : No
If Yes, describe:
.....
.....
- (c) Is impairment likely to be permanent? Yes : Possibly : No
- (d) Any prosthesis prescribed? Yes : No
If Yes, describe:
.....
- (e) Any further treatment/remedial action advised? Yes : No
If Yes, what advice given:
.....
16. Name of Out-patient Clinician:

'Survey of Accidents at Three Health Centres'

B: Accident Reporting Form

Accident Description: To be filled in by Nurse/Receptionist

Patient

Survey No.:

Circle where appropriate

1. Name of Health Centre: (1) Jelale
(2) Ablee
(3) Kiralla

2. Name of Patient:

3. Age: 4. Sex: M : F

5. (i) Date of accident: (ii) Approximate time
(may differ from date of reporting) of Accident

6. Place and Type of Accident:

(a) Did accident/injury occur:

- (1) at work?
- (2) whilst travelling to/from work?
- (3) at home?
- (4) other place, unconnected with home or work

Describe:

(5) Not known

(b) Was it a Road Accident?: Yes : No : Not known

If 'Yes', was patient:

- (1) a pedestrian
- (2) cycling
- (3) driving/riding on a motorcycle or scooter
- (4) driver or occupant of a vehicle

Were any other vehicles involved?:

Yes : No : Not known

'Survey of Accidents at Three Health Centres'

-2-

Patient

Survey No.:

(c) Was injury caused by suspected criminal act: Yes : No : NK

If criminal act suspected, describe events (e.g. stab wound during brawl, assault with robbery, etc.)

.....

.....

7. If accident happened at work, was patient:

(i) doing agricultural work? Yes : No : Not known

(ii) fishing, working with boats, or working as a sailor?	Yes	:	No	:	Not known
---	-----	---	----	---	-----------

(iii) doing industrial, factory
or building work? Yes : No : Not known

8. If accident happened at work,
was machinery involved?: Yes : No : Not known

If 'Yes', describe machinery:

.....

9. If accident happened at home, describe patient's activity at the time of the accident: (e.g. cut whilst chopping wood, fell off ladder, scald whilst cooking, etc)

.....

.....

.....

Name of Nurse/Receptionist:

Questionnaire 4

Accident Follow-up Study

Interviewer:

About a year ago you had an accident and you went to Kiralla hospital for treatment. During the month in which you were injured, over 100 other people also reported to this hospital with accident injuries. We are now visiting all of these patients to find out how they have recovered from their injuries and how the injury has affected their lives. I would be grateful if you could spare some time to answer a few questions about how your injuries are now.

Identification:

1. Your Name:

2. Your Address

.....

3. Can you please tell me your
date of birth/age:

4. Sex: M : F

5. Can you tell me what your injuries were?
(list not more than 5)

1.

2.

3.

4.

5.

6. (a) Which of the injuries you received
has affected you most?
Which has affected you second most?

1.

2.

(b) Why do you consider these to be your worst injuries?

.....

.....

Check Data:

Name:

Sex:

Previous Survey No.

Previously reported date of
birth/age:

'Accident Follow-up Study'

-2-

7. Did they keep you in hospital for some days? Yes : No

If 'No', go to question 10

8. How long did you stay in hospital?

9. Were you operated on? Yes : No

If 'Yes', what was the operation for?

.....

10. After you were discharged, or after your injuries were treated, how long was it before you were well enough to work and to be as active as usual?

...../...../...../not back to normal
months weeks days

11. Were you able to go back to your previous job/work? Yes : No

If 'No', was this because someone else had the job or was it because you were no longer able to do that kind of work?

Describe:

12. Do you still feel pain or other ill-effects from your injuries? Yes : No

If 'Yes', please describe:

13. (a) Did you have a job/work at the time of the accident? Yes : No

If 'Yes', did you receive any pay during the time you were off work because of the accident?

- (1) Full pay
- (2) Reduced pay
- (3) No pay

(b) Did you receive any insurance or compensation for your injuries? Yes : No

'Accident Follow-up Study'

-3-

14. Can you tell me something about how the accident happened?

(1) Where did it happen?

(2) Who was with you at the time?

(3) Were you the only person injured?

(4) At the time of the accident, were
you at work or doing something
connected with your work? Yes : No

(5) What were you doing at the time
of the accident?

(6) Describe in your own words what you think caused the accident
.....
.....
.....

15. Is there anything else you would like to tell me how this accident
has affected you and your family?

.....
.....
.....
.....

Interviewer: Thank you very much for giving me of your time and for
answering all these questions. From this study we hope to learn a lot
that may benefit future accident patients.

Questionnaire 5

Health Centre Survey of Parasitic Disease amongst Young Children.

Name of patient:

Survey number:

Address:

.....

Date attending:/...../.....
Day / Month / Year

Circle where appropriate

Sex: M. F.

Age:	6m < 1yr	1 < 1½yr	1½ < 2yr	2 < 2½yr	2½ < 3 yr
------	----------	----------	----------	----------	-----------

Presenting with Stomach or Bowel Disorder: Yes No

Recent attendance for this same conditions: Yes No

If yes, date of last attendance/...../.....
day / month/ year

Stool specimen provided: Yes No

Initial diagnosis:

Treatment prescribed:

.....

Results of Stool tests:

Parasites present in stool: Yes No

Final Diagnosis:

Examining Doctor:

Questionnaire 6

Water Inspection Form

Survey
Number

0 2 7 1

Town/Village: *Ipitimbi*

Date: *10 July*

Time starting: *1-16*

Time arriving: *1-29*

Time to walk
to source: *8 min.*

Main Current Source of Water:

☒

Well

Stand Pipe/
Piped Water

☐
☐

Stream/river

☐

Spring

Enclosed
Pump

☐

Was the Source Inspected?:

Yes

☒

No

☐

If 'No', state reasons under comments and sign

1. Refuse near source?

Yes

☐

No

☒

2. Animals close to source?

Yes

☒

No

☐

3. Sewerage near source?

Yes

☐

No

☒

4. Trees/Vegetation overhanging?

Yes

☐

No

☒

5. Is water discoloured?

Yes

☐

No

☒

6. Does water smell?

Yes

☐

No

☒

7. Floating/submerged debris?

Yes

☐

No

☒

8. Sample of water taken?

Yes

☒

No

☐

Comments: *Supply seems adequate*

Name of Interviewer:

Fatimha

Questionnaire 7

WHO Household Survey - Samoa

HOUSEHOLD AND FAMILY RECORD

General Information

1. Island

2. Municipality

3. Name of centre/subcentre

4. Village

5. Name of Head of Family

6. Address

7. Religious affiliation

House No.

Household particulars:

Family No.

Maternal and Child Health

Mother

No. of times pregnant	Pregnant at present	If yes Duration	Presence of anaemia Yes/No	Under Treatment Yes/No	Presence of Malnutrition Yes/No
--------------------------	------------------------	--------------------	----------------------------------	------------------------------	---------------------------------------

Children

Presence of Anaemia Yes/No	Under treatment for anaemia Yes/No	Presence of malnutrition Yes/No	Getting Nutritional Supplements
----------------------------------	--	---------------------------------------	---------------------------------------

Family Planning

No.of living children M F T	Age of last child	Couple eligible Yes/No	FP Method used currently	Since when	Past metho used and duration
-----------------------------------	-------------------------	------------------------------	--------------------------------	---------------	------------------------------------

If no method used:

Reason

Remarks

WHO Household Survey - Samoa

-2-

Environmental sanitation

1. House: Type No. of rooms Size

Please insert ☒ or X as applicable; ☒ = Applies

2. Water supply

<u>Source</u>		Safe	Unsafe	Remarks if any
Concrete catchment	()	()	()
Drum catchment	()	()	()	
Well	()	()	()
Spring	()	()	()	
Stream	()	()	()	
Public Water Supply	()	()	()	

3. Type of toilet

		Sanitary	Insanitary	Remarks if any
Water Seal	()	()	()
Over Water	()	()	()	
Pit	()	()	()
Flush (a) Septic Tank	()	()	()	
(b) Cess pool	()	()	()	
(c) Open water	()	()	()	
None	()	()	()	

4. Waste water disposal

		Sanitary	Insanitary	Remarks if any
Soakage pit	()	()	()
Open drain	()	()	()	
Others	()	()	()

5. Refuse disposal

Type

		Sanitary	Insanitary	Remarks if any
On ground	()	()	()
In pit	()	()	()	
Burning	()	()	()
Public disposal	()	()	()	
Others (Specify)	()	()	()	

WHO Household Survey - Samoa

-3-

6. Live stock and poultry

Live stock kept in premises Yes () No () Type

Maintenance and housing	Sanitary ()
of livestock	Insanitary ()

Poultry kept on the premises Yes () No ()

Maintenance and housing of poultry	Sanitary ()
	Insanitary ()

7. Communicable diseases

Disease	Name(s) of person suffering	Under treatment since when	Treatment discontinued since when
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Tuberculosis

Leprosy

Filariasis

Sexually Transmitted Diseases

8. Vector control

<u>Vector</u>	<u>Breeding site</u>	<u>Presenc</u>
---------------	----------------------	----------------

Mosquitoes

Flies

Rodent Sign Gnawing

Seen Live Rub Mark

W.H.O. Household Survey - Samoa

-4-

9. Any other remarks
.....

Signature of
sanitary inspector

Signature of
of D.N./Nurse

Date

W.H.O. Guidelines

This form is to be filled in for each household in District Nurse area during the initial or baseline survey. The information is meant to give a comprehensive picture of each family - its socio-economic status and other relevant particulars in which the family lives.

Authors' comment : Forms such as the above should be accompanied by explicit (detailed) instructions to the interviewers to ensure their being completed correctly.

